TEXTILE TECHNOLOGY DIGEST

VOLUME 15 JANUARY 1958 NUMBER 1

ABSTRACTS

FIBERS A

DISCUSSION OF STRATTON'S PROBLEM (THE MAN IN THE WHITE SUIT). J. C. Ward (Courtaulds Ltd). Research 10: 472-477 (Dec. 1957). (1)

The problem of the ideal fiber, which will be both cheap and versatile, is discussed. The author concludes that present tailor-made synthetic polymers are likely, on account of their comparative inflexibility and high price, to be confined to fairly specialized uses. A polymer which is designed to be chemically adaptable and cheap is likely, in the long run, to find the biggest outlet in the textile business. Less is now heard of new fibers, and more of new ways of treating the old ones. If this trend continues, it is unlikely that the cellulosic fibers will be displaced from their present strong position. Photomicrographs.

NATURAL FIBERS A 1

CORRECTION: BRENNER AND SCOCCA ARTICLE. F. C. Brenner (Johnson & Johnson). (Letter to the editor). Textile Research J. 27: 918 (Nov. 1957). (2)

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With sufficient care and attention mixtures of mesta and jute can be used successfully without appreciably affecting yarn quality. The results of recent experiments to determine the properties of various blends are described. Tables.

COTTON GINNING AND CLEANING: THEIR RELATIONSHIP TO YARN QUALITY. A. P. Aldrich, Jr. Textile Bull. 83: 51-53 (Dec. 1957). (6)

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ACTINOMYCETE DISINTEGRATION OF RAW WOOL. M. N. Philipson. (Letter to the editor). Nature 180: 1205-1206 (Nov. 30, 1957). (9)

MANMADE FIBERS A 2

DYNEL. Fibres 18: 373-374 (Nov. 1957). (10)

The present position and future development of Dynel in the United Kingdom are discussed briefly.

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The effects of fibers in improving the moisture absorption, impact strength, and chemical resistance of fiber-reinforced laminates are considered.

MANMADE FIBER TREND. Textile Age 21: 8-10 (Dec. 1957). (12)

Some of the important recent trends of chemical fibers in the textile industry are presented briefly.

PAPER FROM SYNTHETIC FIBERS. D. G. Magill, Jr. and R. T. Jackson (Riegel Paper Corp.). Encyclopedia of Chem. Technology suppl. 1: 614-619 (1957). (13)

A survey of recent developments. 4 references.

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REACTIVITY OF THE DISULFIDE BONDS OF STRETCHED WOOL FIBERS. J. P. E. Human and H. Lindley (Wool Textile Research Lab., C.S.I.R.O., Australia). (Letter to the editor). Textile Research J. 27: 917 (Nov. 1957). (14)

FIBERS FROM COPOLYMERS AND BLENDED POLYMERS. PART 2. REGULAR COPOLYMERS. J. W. S. Hearle. Skinner's Silk & Rayon Record 31: 1326-1327 (Dec. 1957). (15)

Copolymers with a regular arrangement of components are called block copolymers and graft copolymers. The structures of each are discussed, and it is pointed out that while block copolymers are suitable for fiber formation the graft copolymers are unlikely to provide new fibers, although they may be valuable as textile auxiliaries. Diagrams. 2 references.

YARN PRODUCTION B

PROCESSING ORLON STAPLE. R. A. Wells (E.I. du Pont de Nemours). Textile Mfr. 83: 556-559 (Nov. 1957). (16)

The production of high bulk yarns on the Turbo stapler, Pacific converter, worsted system, and cotton system are explained in detail. Diagrams. Graphs. See also abstract 3101 (1957).

PROCESSING DU PONT 420 NYLON STAPLE IN BLENDS WITH COTTON. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Nov. 1957. 2 p. Bull. N-93. Free. (17)

Cotton system processing of low percentage blends of the new du Pont reinforcing nylon staple and cotton.

BLENDS FROM THREE FIBER COMPONENTS. L. Rudolph. Reyon Zellwolle Chemiefasern No. 3: 176-180; No. 4: 258-261 (1957). In German. Through BCIRA 37: 445 (1957). (18)

Reasons for mixing the fibers, means for improving the technological and physical properties, preparation of fiber blends, and yarn quality are discussed. Cross-sections of various ternary mixtures from Vistra, Wolcrylon, wool and PeCe fibers are illustrated and tables are given showing the fiber distribution in the yarn cross-sections.

QUALITY IMPROVEMENT BY MIXING SYNTHETIC AND NATURAL FIBERS. A. Wilhelm. Melliand Textilber 38, No. 3: 271-275; No. 4: 407-409; No. 6: 639-640 (1957). In German. Through BCIRA 37: 409 (1957). (19)

Finishing difficulties and technological mixing problems are discussed and the experiences gained with mixtures of wool and polyamide, polyester, polyacrylonitrile or polyvinyl fibers, and ternary mixtures (Perlon, wool, and acetate rayon) are summarized.

SEWED SPLICES FOR TOWS. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Nov. 1957. 1 p. Bull. X-80. Free. (20)

Description and removal of a sewed splice.

MAN-MADE FIBERS FOR CARPET YARNS. H. Sneyd (Courtaulds Ltd). Textile Wkly. 57: 1462-1465 (Nov. 22, 1957). (21)

Details of the types of fibers available for carpet yarns are given, and the various processing methods for them are outlined.

STUDY OF SOME FACTORS AFFECTING THE PULLING OF RAGS. PART 1. C. D. Meyer and P. P. Townend (Leeds Univ.). Textile Mfr. 83: 552-555 (Nov. 1957). (22)

Results of detailed investigations to determine the extent to which the various settings influence the presence of unpulled pieces in the shoddy are presented. Tables. Photographs.

OPENING, PICKING, FIBER PREPARATION B 1

INCLINED PICKER CLEANER. N. Schlumberger & Co. Industrie Textile: 181-182 (Mar. 1957). In French. Through BCIRA 37: 445 (1957). (23)

Constructional details and characteristic features of this machine are described and its advantages enumerated. Two of these units can be incorporated (at the beginning and end) into a "one-process" battery for cleaning and opening cotton.

CARDING AND COMBING B 2

PLATT/JOSEPHY CONTINENTAL CARD SETS. Platts Bull. 9, No. 4: 93-98 (1957). (24)

The features and advantages of the Platt/Josephy continental type carding sets are described. Various standard combinations are available to handle woolen blends, waste blends, synthetic staple fibers, and mixtures of synthetics and wool, cotton waste, asbestos, reclaimed wool, etc. Diagrams of a fully automatic, three part card set for fine wools and a fully automatic two part card set for carpet, blanket, and similar yarns are included. Photographs.

CARDING MACHINE EQUALIZER. L. Gimel. Industrie Textile: 193-194 (Mar. 1957). In French. Through BCIRA 37: 445 (1957). (25)

The card described, giving a sliver with uniform cross-section, is characterized by an equalizing device which compensates any sliver irregularity, automatically and continuously, after bringing the web to the condensing funnel.

DRAWING AND ROVING B 3

FACTORS AFFECTING TWIST IN ROVING. C. Adams (Alabama Polytechnic Inst.). Textile Bull. 83: 69-72 (Nov. 1957). (26)

The factors affecting twist in roving (fiber length, fiber cohesion, roving uniformity, draft, and bulk) and the effect of twist on yarn strength are discussed, and a method for predetermining optimum twist in roving is described.

MS2 SPEED FRAMES: TWO FURTHER DEVELOPMENTS. Platts Bull. 9, No. 4: 89-92 (1957). (27)

Optimum package sizes for speed frame processing of 0.6 to 1.2 hank roving are discussed, and the features of the Arro flyer, available in all sizes up to 12 x 7 in., are described. Graphs. Photographs.

POINTERS FOR CHANGING OVER TO 12 x 7 ROVING. R. S. Crosley. Textile World 107: 141, 147-149 (Dec. 1957). (28)

Factors to be considered in converting from a 12 x 6 to 12 x 7 roving frame include direct and indirect costs, contour of cone, degree of twist and tension, and possible spreading of flyers.

IMPROVING THE EVENNESS OF STAPLE FIBER SLIVER BY ELIMINATING INTERMITTENT DRAFTING. G. Herbert. Textil-Praxis (English ed.) No. 3: 105-109 (Sept. 1957). (29)

A theory of intermittent drafting due to frictional forces is presented. The irregularities produced may be prevented by reducing the distance between feed and drafting rolls and increasing the total draft. A reduction of this theory to practice is given. Diagrams.

MDF 3 DRAWING FRAME FOR IMPROVED SLIVER REGULARITY AND INCREASED PRODUCTION. Platts Bull. 9, No. 4: 79-88 (1957). (30)

Mill reports on sliver uniformity and yarn quality using the MDF 3 drawing frame equipped with 2 over 2 drafting system are presented. In addition, the main features and advantages of the machine are outlined. Photographs. Tables. Graphs.

MODERN WORSTED SPINNING PRACTICE. PART 7. THE AMERICAN SYSTEM OF DRAWING. N. Roper. Textile Mfr. 83: 545-549 (Nov. 1957). (31)

Operation and applications of the Warner and Swasey, Saco-Lowell, and Whitin systems are described. Diagrams.

PROGRESS IN THE CONTINENTAL SYSTEM OF WORSTED DRAWING. Prince-Smith & Stells Ltd. Man-Made Textiles 34: 40-41 (Dec. 1957); Can. Textile J. 74: 76-78 (Dec. 13, 1957); Textile Wkly. 57(2): 1566-1567 (Nov. 29, 1957). (32)

The 3-operation drawing set described constitutes (1) Raper autoleveller Speed-O-Gill, (2) Raper autoleveller bicoiler draw box with pressure drafter, and (3) two 90 spindle MS2 cone reducers with Versatex drafting. It produces rovings suitable for spinning on the Mega-flex ring spinning frame with Versatex drafting (or Platts MR3 ring spinning frame with Versatex drafting) to 1/48s metric, i.e. 1/42-1/2s English, with 18 of a draft in the spinning. Photographs.

TOP ROLL RUNOUT. W. C. Cunningham (Saco-Lowell Shops). Textile Bull. 83: 69-70 (Dec. 1957). (33)

The two basic types of top roll designs, cap bar and suspension, are described, their limitations discussed, and the need for proper maintenance and lubrication is stressed.

SPINNING, WINDING, TWISTING B 4

FACTORS LIMITING SPEEDS IN RING SPINNING: THEORETICAL STUDY. V. B. Merchant. Indian Textile J. 68: 36-40 (Oct. 1957). (34)

The various factors affecting ring spinning are listed, but the discussion is confined to the effect of traveler friction. It is concluded that the increase of ring diameter and traveler speed is not the best means of obtaining larger packages. Controlled balloon spinning, on the other hand, offers an excellent opportunity for increasing the lift of the packages without reduction in the spindle speed. Combined with the principle of stationary ring rail and moving spindle rail this offers the most promising means for large package spinning. Diagrams. 7 references.

YARN TENSION AND ITS PROBLEMS. PART 2. J. R. Wright (Uster Corp.). Textile Bull. 83: 59-61 (Dec. 1957). (35)

The factors influencing spinning creel tension and tension on spinning and twisting frames are discussed. The use of the Uster Recordograph in establishing the sources of tension variation in these processes is explained. Diagrams.

LARGE PACKAGE SPINNING ON THE MWR2 WOOLEN RING FRAME. Platts Bull. 9, No. 4: 99-102 (1957). (36)

Results of spinning tests on a blend of staple fiber with a small percentage of wool carried out on a standard MWR2 ring frame with 5-1/2 in. diameter rings and 12 in. lift are presented. The object of the tests was to ascertain the maximum spindle speed the blends would stand, the maximum front roller delivery rate, the highest production based on these two factors, and the maximum length of knotless yarn that could be wound onto a package. Photographs. Tables. Diagrams.

CTF-5B-139U MULTIPLE OUTLET AIR DISTRIBUTOR. Parks-Cramer Co. Textile Bull. 83: 85-86 (Nov. 1957). (37)

Parks-Cramer's newest attachment for its spinning frame cleaner allows delivery of regulated velocities of air in specific areas by the same unit traveling the length of the frame. The operation of the unit is explained, and the minimum direct spinning room labor savings which can be realized through the use of the unit are presented. Photographs.

KNOTLESS YARN IN GUARANTEED LENGTHS FOR TUFTED CARPETS. Taylor & Hargreaves Ltd. Man-Made Textiles 34: 46 (Dec. 1957). (38)

The Hengstler type 33b measuring counter, designed for cone-winding machinery, ensures uniformity of length from package to package, eliminating any need for package weighing.

MEDIUM-HEAVY RING DOUBLER. Sydney & E. Scragg Ltd. Textile Wkly. 57: 1242 (Nov. 1, 1957). (39)

The CLA doubler is expected to operate in the top range of spindle speeds while offering three times the capacity of the light-duty machine, e.g. producing a 3 lb. package at around 10,000 rpm. Photograph.

KNOTS MADE IN WINDING. G. Lee (Thomas Holt Ltd). Textile Wkly. 57: 1382 (Nov. 15, 1957). (40)

The dog, weaver's, fisherman's, and Minifast knots are described, and their respective advantages are discussed. Photographs.

COLLECTING EMPTY TUBES ON A CONTINUOUS SPINNING MACHINE. Industrie Textile: 185-186 (Mar. 1957). In French. Through BCIRA 37: 446 (1957). (41)

Arrangement for providing on both sides of the machine, in the empty space at the upper part of the bobbin creel, a trough or, better still, a small endless conveyor moving slowly and within reach of the hand for the removal of empty tubes which are conveyed into collecting boxes.

YARN SUPPLY: THE PINEAPPLE CONE. R. W. Mills. Hosiery Times 30: 63-65 (Nov. 1957). (42)

The principal features of an attachment to a winding machine used to produce a pineapple cone are explained. Diagrams.

DETERMINATION OF OPTIMUM PACKAGE SIZE FOR REWINDING. F. G. Ernest. Textile Ind. 121: 77-80 (Dec. 1957). (43)

The ratio of the machine cycle to the unwinding time depends on a number of variable factors such as the length of the cycle itself, the size of the supply package, the yarn count, and the winding speed. Tables are given to help in arriving at a decision regarding the adjustment of each factor for the purpose of achieving the most advantageous arrangement in rewinding. A complete plan of expected rewinding time, given the variability of spinning speeds, spinning running time, and winding speeds, makes it possible to adjust the machine cycle to the most advantageous duration for a given package size, or if this is not feasible, to tailor the size of the package to fit the machine cycle for the highest efficiency.

THREE WAYS TO SPIN SPLICE-SLUB YARN. G. B. Peeler. Textile World 107: 130-132, 200-202 (Dec. 1957). (44)

EFFECTS OF ROLL RUNOUT ON HIGH DRAFT NON-UNIFORMITY. C. Brandt (Whitin Machine Works). Textile Bull. 83: 68-69 (Dec. 1957). (45)

Roll runout or eccentricity is more noticeable because of high drafts. Nonuniformity of the stock between a pair of rolls which are concentric changes as the square of the draft between the rolls. With a total draft of 40 to 50, the roll runout should not be over .002 in. Lifting out the rolls to scour them can easily warp them that much.

AUTOMATIC PLACING OF TRAVELERS. P. Bayard. Industrie Textile: 275-276 (Apr. 1957). In French. Through BCIRA 37: 446 (1957). (46)

Device by which travelers (in bulk) are spaced and distributed on a conveyor which drops them at the spindle points. All incorrectly aligned travelers are automatically removed from the spindles and the travelers that have fallen close to the spindle points are returned onto the conveyor.

NOMOGRAMS FOR DETERMINING YARN TENSIONS. F. Fourne. Textile World 107: 104-105, 202, 204 (Dec. 1957). (47)

Nomograms are given which can be used to find expected yarn tensions on uptwisters, bell twisters, ring twisters, and two-for-one twisters. Their use is explained.

YARNS B 5

RAYON TIRE CORD: FIVE WAYS BEST BY TEST. J. J. Harrison (Courtaulds (Canada) Ltd). Can. Textile J. 74: 74-75 (Dec. 13, 1957). (48)

Report on a research and testing program through which tires constructed from rayon cord proved superior to those manufactured with other competitive textile cords because they showed: longer tread life, quieter ride, increased carcass stability, greater heat resistance, and an increased mileage yield on subsequent retreading.

TIRE CORD RESEARCH. Textile Age 21: 14 (Dec. 1957). (49)

The problems which are keeping nylon tire cord from completely replacing rayon tire cord in passenger car tires are briefly outlined.

WEATHER RESISTANCE OF SYNTHETIC FIBER YARNS. G. Klust. Textil-Praxis 12, No. 3: 233-236 (1957). In German. Through BCIRA 37: 330 (1957). (50)

Methods of testing the weather resistance of yarns and results of weathering tests are reviewed. The weather resistance of the fibers tested decreases in the following order: not after-chlorinated polyvinyl chloride, polyacrylonitrile, polyamide, polyvinyl alcohol, after-chlorinated polyvinyl chloride, polyester, cotton and bast fibers, bright Perlon and nylon, delustered Perlon and nylon. 21 references.

BULKED YARNS FOR WEAVING AND KNITTING: SURVEY OF RECENT PROGRESS. G. Sheppard (British Nylon Spinners Ltd). Textile Wkly. 57: 1341-1345 (Nov. 8, 1957). (51)

NEW YARNS WIDEN FABRIC HORIZONS. F. W. Noechel (Allied Chemical & Dye Corp.). Modern Textiles Mag. 38: 63-68 (Dec. 1957). (52)

The preparation of texturized Caprolan yarns by looping, crimping, and curling by various processes is explained, and their use in achieving new fabric effects, as illustrated by carpets, is described. A brief note on cleanability and pilling properties is included. Photographs.

MECHANISM OF RUPTURE OF JUTE YARN UNDER TENSILE STRESS. B. L. Banerjee and M. K. Sen (Indian Jute Mills Assoc. Research Inst.). Textile Research J. 27: 846-854 (Nov. 1957). (53)

The effects of length, number, and tensile strength of the fibers on tensile strength of yarn are considered, along with the yarn geometry as described by grist, diameter, twist, and specimen length. Tables. Graphs. 15 references.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

YARN GUIDES FROM PARTIALLY FUSED ALUMINA. L. Desmarquest & Cie. Industrie Textile: 197-198 (Mar. 1957). In French. Through BCIRA 37: 447 (1957). (54)

The mechanical characteristics, especially hardness, resistance to compression and traction, abrasion resistance, etc., of thread guides made from partly fused alumina make them particularly suitable for fibers such as Crylor, Tergal, Dacron, etc. They offer remarkable resistance to acids so that they can be used with wet fibers.

WARP SIZING. PART 20. P. V. Seydel. Textil Ind. 121: 119-127 (Dec. 1957). (55)

Controls available for cooking size, maintaining level and temperature of size in size box, moisture, stretch, tension, and squeeze roll pressures. Reprinting of the entire series in book form is planned for the spring of 1958. The book will also contain an up-to-date bibliography plus reference data. Available from Textile Industries, 806 Peachtree St., N. E., Atlanta 8, Ga.

WINDING YARNS ON CONICAL SURFACES. G. Lee. Textile Mfr. 83: 561-566 (Nov. 1957). (56)

The combination of the factors of tension and pressure and incorrect application of either or both are the cause of most of the problems encountered in cone winding. This article considers in detail the following conditions: tension variation in spinning packages; tension variation in unwinding the spinning package in making a cone due to balloon change in length and speed, yarn drag around the emptying package, speed variation due to the cone, and change in yarn tension due to traverse length; influence of tension and pressure between cone and drum, and of pattern winding on package quality; tension variation in unwinding cone in making beams due to length of traverse, diameter of package, distance of package from tension, type of tension, speed, count, and distance of tension from beamer. Graphs. Diagrams. Photographs.

MULTI-MOTOR DRIVES IN SIZING MACHINERY. A. Gasser. Textil-Praxis 12, No. 4: 354-356 (1957). In German. Through BCIRA 37: 412 (1957). (57)

Description is given of the new Rüti sizing machines with individual drives for the squeezing rollers, doffers behind the dryer, and feed roller in front of the warping device.

WEAVING C 2

UNCONVENTIONAL LOOMS. PART 1. ROTARY MECHANISMS. G. Turton. Man-Made Textiles 34: 42-44 (Dec. 1957). (58)

Following a brief history of the development of the power loom, the operation of the Fayolle-Ancet circular loom and Slot polygonal loom are discussed and evaluated. Photographs. Diagram.

DEFECTS IN GREY FABRICS: CAUSES AND REMEDIES. WEFT LOOPS. P. Bertoli. Riv. Tessile 12, No. 4: 353-355 (1957). In Italian. Through BCIRA 37: 460 (1957). (59)

Types of weft loops and trails, causes and preventive measures, and elimination of the defects are discussed.

MOUNTING OF LOOSE REEDS ON LOOMS. R. Viadel. Industrie Textile: 221-222 (Mar. 1957). In French. Through BCIRA 37: 447 (1957). (60)

The device described comprises means for suspending the oscillating reed on the lay, this reed being provided with a rod set situated at some distance from the suspending means. By regulating this distance, it is possible to obtain, even with the finest reeds, their perfect functioning on any loom.

LOOM DESIGN AND DEVELOPMENT. F. M. Fitzgerald (Draper Corp.). Can. Textile J. 74: 71-73 (Dec. 13, 1957). (61)

Draper developments in the conventional shuttle loom field (all-molded shuttle, new fly shuttle loom, and automatic filling magazine) and with the shuttleless loom are briefly reviewed.

STUDY IN LOOM FIXING. PART 17. F. D. Herring. Textile Bull. 83: 73-76 (Nov. 1957). (62)

The essentials for a loom maintenance program are given.

SELF-OSCILLATING INDUCTION MOTOR FOR SHUTTLE PROPULSION. E. R. Laithwaite and P. J. Lawrenson. Proc. Inst. Elec. Engrs A, 104: 93-101 (April 1957). Through BCIRA 37: 413 (1957). (63)

The principles of the self-oscillating, linear induction motor are outlined. Expressions are derived for the amplitude and period of oscillation for an unloaded motor and for a motor operating against a constant load force. These are used to derive theoretical curves and phase-plane diagrams which are compared with those obtained in practice. The problems of applying the motor to shuttle propulsion are discussed.

SHUTTLES FOR MECHANICAL LOOMS. PART 1. W. Riesnert. Textil-Praxis 12, No. 4: 363-367 (1957). In German. Through BCIRA 37: 413 (1957). (64)

Different kinds of shuttles are described (with reference to standard specifications) and the choice of shuttles for various types of looms is indicated.

WEFT TENSIONS DURING WEAVING. H. Griese and F. W. Hanings. Melliand Textilber. 38, No. 3: 257-261; No. 4: 396-399; No. 5: 511-515 (1957). In German. Through BCIRA 37: 414 (1957). (65)

The course of the weft-thread tension, when using various kinds and dimensions of weft bobbins and various constructions of shuttles and thread brakes, are described, and diagrams are given showing the advantages and disadvantages of various types of shuttle linings and thread brakes. The measurements were carried out by inductive and capacitive methods on flax, cotton, and viscose rayon yarns.

WEAVING BEHAVIOR OF COTTON YARN. D. De Meulemeester, G. Raes and G. De Backer. Ann. Sci. Textiles Belges No. 4: 74-94 (Dec. 1956). In French. Through BCIRA 37: 300 (1957). (66)

Experimental results show that it is not possible to predict the weaving behavior of yarn from the number of breakages caused by stress or from the characteristics of the unsized yarn. The number of breakages decreases with increasing breaking elongation and it is, therefore, advisable to ascertain whether the breaking elongation of the sized yarn remains within reasonable limits. The abrasion resistance appears to be unrelated to the weaving behavior of the yarn.

MILL TEST PROCEDURES. PART 10. TESTS TO IMPROVE WEAVING AND CLOTH QUALITY. N. L. Enrick. Modern Textiles Mag. 38: 40-42, 68-69, 83 (Dec. 1957). (67)

Presents the following test procedures: quill check, warp takeup, fabric strength, cloth analysis, loom settings, folders, and yardage clocks. Illustrative material provides a form used as a worksheet and reference record of the quill check test. Forms are shown as used in conjunction with the loom settings test, furnishing a breakdown of causes of loom stops, a general check-survey of loom conditions, and a detailed list of settings to be checked and recorded.

KNITTING C 3

SEAMLESS HOSIERY LENGTH CONTROL. Fidelity Co. Hosiery Underwear Rev. 40: 73-75 (Dec. 1957). (68)

Details of the Fidelity yarn tensioner and compensator for controlling length and stretch of seamless hosiery during knitting are given. Diagrams.

AVOIDING NARROWING TROUBLES ON FF MACHINES. W. D. Frye. Textile Ind. 121: 154-155 (Dec. 1957). (69)

Pointers for preventing narrowing difficulties on full-fashioned hosiery machines. Photographs.

IMPROVED RUBBER FEEDER FOR KOMETS. K. O. Metz. Textile Ind. 121: 153 (Dec. 1957). (70)

The rubber feeder for the Scott & Williams Komet and Links and Links machines permits the upper feed cone to be raised to prevent its turning when it is not in use. Since the cones are not in contact with each other except during the actual knitting cycle, wear on those parts is reduced to a minimum. The upper cone is lifted out of action by a movement of the feeder mechanism rather than from some other motion of the machine permitting accurate timing of the cones so that the rubber is under control from the first course in the welt until the top is completed. Diagrams.

ELEMENTS OF KNITWEAR DESIGN: CLEAR-CUT DESIGNS OF THE CONTINENTAL STYLE. W. Davis. Hosiery Times 30: 16-19. 93 (Nov. 1957). (71)

CRIMPED CONTINUOUS FILAMENT NYLON: SUGGESTIONS FOR KNITTING ON CIRCULAR MACHINES. British Nylon Spinners Ltd. Hosiery Times 30: 29 (Nov. 1957). (72)

SELECTING FF KNITTING SOLUTIONS. J. C. Baumgardner (Lee Hosiery Mill). Textile World 107: 133 (Dec. 1957). (73)

Recommendations for the selection of chemicals and oils for use in the moistening boxes of full-fashioned knitting machines are given.

USE OF METALLIC YARNS IN KNITGOODS. PART 2. W. E. Shinn. Knitter 21: 35-42 (Dec. 1957). (74)

The use of the lay-in and float, knit and float, and plating principles for the use of metallic yarns as ornamental or decorative materials is explained. The calculation of gauge and yarn size, delivery means, use of the Lawson tension compensator, selection and adaptation of yarns, and dyeing methods are discussed in detail.

FOCUS ON THE CABLE STITCH. J. B. Lancashire. Hosiery Times 30: 23-27 (Nov. 1957). (75)

Automatic cabling on the Dubied CAL machine, Stoll LIUM single system flat purl machine, and on the double-system loop-transferring V-type DOFUMA machine is described. Diagrams.

BENTLEY-WILDT MODEL RTRA LOOP TRANSFER MACHINE FOR GARMENT LENGTHS. Hosiery Trade J. 64: 66-68 (Dec. 1957). (76)

Included in this new model are gear-operated needle stitch transfer mechanism, three-quality stitch cam control in cylinder and dial, automatic lubrication of cam tracks, and two-speed electric motor drive. Photographs.

SINGLE SYSTEM KNITTING. Universal Maschinenfabrik GmbH. Hosiery Trade J. 64: 92-93 (Dec. 1957). (77)

The MC1 is a fully automatic single system non-jacquard V-type flat knitting machine, suitable for the manufacture of the bodies and sleeves of stitch shaped garments and also collars and other trimmings. Features of the machine and unusual stitch and color effects possible are described.

WILDMAN-JACQUARD FBW-6 HIGH-PILE FABRIC MACHINE. Hosiery Trade J. 64: 79-80 (Dec. 1957). (78)

This improved model of the high pile machine has six feeds and six carding units, which give a 50% increased production. Photographs. Diagram.

KOHLER RANGE OF CROCHETING MACHINES. A. G. Kohler & Co. Hosiery Trade J. 64: 96-98 (Dec. 1957). (79)

Features of four Sanger and Graf type models are described.

FABRICS C 4

BONDED FIBER FABRICS. Man-Made Textiles 34: 56-57 (Dec. 1957). (80)

Applications for nonwoven fabrics are briefly discussed.

DESIGN IN WOVEN STRUCTURE. PART 59. PLANNING COLOUR-AND-WEAVE EFFECTS ON A 1/3 TWILL BASE. D. C. Snowden. Wool Rev. 31: 27-28 (Nov. 1957). (81)

UNUSUAL METHOD OF DEVELOPING WEAVES. D. C. Snowden. Man-Made Textiles 34: 79 (Dec. 1957). (82)

The quartering method described tends to produce weaves of a diamond character or with entwining twills. The method consists of selecting some simple order of marks and blanks and writing it on the outside threads and picks of a given pattern repeat. Then, moving inwards to the center of the design by one end and one pick at a time the process is repeated until the complete repeat of the pattern is covered. Diagrams.

NEW FABRIC DESIGNING APPARATUS. G. Schällebaum. Textil-Praxis 12, No. 3: 260-262 (1957). In German. Through BCIRA 37: 330 (1957). (83)

The designing of paper patterns can be carried out on the apparatus described by a slight pressure on a feeler lever while the observer examines the weave by means of a lens. Details of the mechanism are given.

PHYSICAL PROPERTIES OF COATED NYLON FABRICS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Oct. 1957. 1 p. Bull. N-104 (replaces N-76). Free. (84)

DU PONT FIBERS IN INDUSTRY. E. I. du Pont de Nemours & Co., Industrial Merchandising Section, Wilmington 98, Del. 1957. 76 p. Free. (85)

This book presents data on the performance of synthetic fibers in important industrial applications. Some information on the size and growth of the various markets is given. Also included are physical and chemical properties of du Pont fibers to assist in selection of the right fiber to accomplish a specific task.

ANALYSIS OF GENERAL FORMULAS FOR FABRIC CALCULATIONS. A. Marti. Bull. Inst. Textile France No. 64: 53-66 (1956). In French. Through BCIRA 37: 331 (1957). (86)

The study was carried out to ascertain how certain fabric characteristics vary theoretically as a function of certain fiber parameters and to suggest general formulas which relate these characteristics and parameters. Five examples are given, with diagrams plotted on the basis of experimental data.

INDUSTRIAL USES OF RILSAN FABRICS. A. Belloni. Riv. Tessile 12, No. 3: 249-252 (1957). In Italian. Through BCIRA 37: 431 (1957). (87)

The characteristics of Rilsan fabrics are discussed, with special reference to their use as filter material.

LANTOR NONWOVEN FABRICS. Lantor Ltd. Skinner's Silk & Rayon Record 31: 1306-1307 (Dec. 1957). (88)

The properties of the Lantor range of nonwoven fabrics for interlinings and coated fabrics are described. Swatches.

TUFTED TEXTILE TRADE INDEX. Skinner's Silk & Rayon Record 31: 1363-1373 (Dec. 1957). (89)

Alphabetical listing of British manufacturers of tufted textiles, tufting machinery, ancillary equipment, chemicals and backing compounds, dyestuffs, backing cloths, and fibers, as well as yarn spinners for tufted textiles, dyers, and waste buyers.

COMPARATIVE RATINGS OF NO-IRON WHITE SHIRTS. Consumer Bull. 40: 7-9 (Dec. 1957). (90)

Shirts of Dacron-and-cotton fabrics and all-cotton shirts with no-iron finishes were included in this study, as well as one shirt of a Taslan-textured Dacron. The shirts were worn, machine-washed in warm water with no final spin-dry cycle, and then hung on plastic hangers and drip dried. This routine was followed until each shirt had had 13 wearings and launderings. In the next series of tests, the same shirts were worn and washed as before, but dried in an electric clothes dryer.

DEVELOPMENT OF DESIGN DATA ON THE MECHANICS OF AIR FLOW THROUGH PARACHUTE FABRICS. W. G. Klein, C. A. Lermond, and M. M. Platt (Fabric Research Labs). Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. Sept. 1957. 91 p. WADC Technical Report 56-576. (91)

The factors involved in parachute fabric permeability and the quantitative prediction of their influence are studied. A representative selection of commercially produced parachute fabrics was examined to determine the degree to which they meet current permeability specifications.

RUBBERIZED FABRICS. Skinner's Silk & Rayon Record 31: 1314-1316 (Dec. 1957). (92)

The main advantages of rubberized upholstery and pile fabrics are listed, the use of synthetic vs natural rubber compared, and a suggested plan for a lick-roll backing plant is included. Swatches.

LATEX IMPREGNATION FOR NONWOVEN FABRICS. D. Wilson. Textile Merc. 137: 771-775 (Nov. 8, 1957); Textile Wkly. 57: 1495-1498 (Nov. 22, 1957). (93)

Details of successful methods evolved to overcome problems in introducing the bonding agent and handling the saturated web are given. Diagrams. Photographs.

NONWOVENS BY CHAIN STITCH. PART 2. P. Abbenheim. Skinner's Silk & Rayon Record 31: 1312-1313 (Dec. 1957). (94)

Features and operation of an East German fiber fleece chain stitch machine are described. Photographs. Diagrams. For part 1 see Abstr. 2807 (1957).

FINISHING AND CHEMICAL PROCESSING D

PRINCIPLES OF DYEING AND FINISHING ORLON. F. G. Parker (E.I. du Pont de Nemours & Co.). Hosiery Times 30: 45-55 (Nov. 1957). (95)

NEW PRODUCTS DEVELOPED SINCE NOVEMBER 1956. Am. Dyestuff Reptr. 46: 891-919 (Dec. 2, 1957). (96)

Products which have been placed on the market or further developed since November 1956 are divided into three sections: (1) chemicals, (2) coloring materials, and (3) equipment.

FABRIC DEFECTS IN WOOL FINISHING. PART 1. WET FINISHING. R. G. Stoehr (Botany Finishing Co.). Textile Ind. 121: 84-90 (Dec. 1957). (97)

The causes of defects due to fulling, scouring, carbonizing, and napping are examined, and means for correcting them are described. Photographs.

EFFECT OF ALTERNATING MAGNETIC FIELD IN DYEING AND BLEACHING. D. Fornelli. Tinctoria 54, No. 3: 91-95 (1957). In Italian. Through BCIRA 37: 450 (1957). (98)

Bleaching is slightly more effective when carried out in an alternating magnetic field with a high percentage of an oxygen-liberating compound. Under the conditions described, however, with limited intensity and frequency, the alternating magnetic field did not affect the affinity of dyes, the discharge of the fabric printed with vat dyes, or the soaping of the vat dye.

HEAT SETTING WOVEN AND KNITTED MAN-MADE FABRICS. H-G. Jakob. Reyon Zellwolle Chemiefasern No. 4: 270-273 (1957). In German. Through BCIRA 37: 453 (1957). (99)

This survey of methods used was limited to fiber types whose softening regions and melting points lie considerably above 100° C. Wet treatment at boiling temperature causes shrinkage in the longitudinal direction. In fibers softening below or at 100° C, this treatment produces hardening and considerable contraction. A table lists the fibers, producers, chemical structure of the fibers, and their moisture regain, softening temperatures, and melting points.

PROCESSING TRIACETATE/VISCOSE BLEND CLOTHS. J. Wardle (Courtaulds Ltd). Man-Made Textiles 34: 70-72 (Dec. 1957). (100)

Recommendations for scouring, bleaching, dyeing, and resin finishing are given.

FINISHING BULKED NYLON TEXTILES. W. A. Morris (British Nylon Spinners Ltd). Textile Wkly. 57: 1569 (Nov. 29. 1957). (101)

The usual sequence of relax, set, dye, and finish is sometimes modified by omitting the presetting operation and using a postsetting technique. Recommended procedures for half-hose, stockings, and circular knit fabrics are outlined.

CHEMICAL PROCESSES D 1

CRIMPED NYLON HALF-HOSE: FINISHING WHERE FALSE TWIST PROCESS YARNS ARE USED. British Nylon Spinners Ltd. Hosiery Times 30: 29-31 (Nov. 1957). (102)

SOLVAY ACTIVATED HYDROGEN PEROXIDE BLEACHING PROCESS. W. R. Steele and S. M. Rogers (Allied Chemical & Dye Corp.). Am. Dyestuff Reptr. 46: P965-P967 (Dec. 16, 1957). (103)

The distinctive step of the Solvay activated hydrogen peroxide bleaching process is a short prebleach just before treatment with peroxide. During a one-minute interval, the cotton is saturated at room temperature with its own weight of sodium hypochlorite of sufficient concentration to add to the cloth about 0.10% of sodium hypochlorite. When the treated cloth contacts the peroxide solution, all of the residual hypochlorite is decomposed immediately by an equivalent quantity of hydrogen peroxide. Tables.

BLEACHING BY THE PAD-ROLL PROCESS. B. F. Mellbin. Textil-Praxis 12, No. 4: 370-377 (1957). In German. Through BCIRA 37: 417 (1957). (104)

The dyeing process on the pad-roll installation is described in detail and the use of this installation for desizing, scouring, and bleaching operations is discussed, with reference to the problems arising in chlorite bleaching and a new method for the activation of the chlorite solutions.

INFORMATION ABOUT POSSIBLE DISCOLORATION OF ORLON SWEATERS IN DRYCLEANING. Canadian Research Inst. of Launderers & Cleaners. Textile J. Australia 32: 834-836 (Sept. 20, 1957). (105)

During drycleaning Orlon sweaters will pick up fine particles of dyes or pigments which have rubbed off other dyed fabrics. Therefore, it is emphasized that Orlon sweaters should be cleaned only in loads of sweaters or soft wools of similar color, which cannot give rise to dye or pigment particles of strong or dark colors.

REMOVAL OF STARCH AND PROTEIN SIZES. Textile Wkly. 57(2): 1568, 1570 (Nov. 29, 1957). (106)

The factors involved in enzymatic desizing using Termozym (powder) and Aquazym (liquid), and recommended methods for their use are discussed.

SIMPLIFIED CONTROL ANALYSES OF SOLUTIONS USED IN PARTIAL ACETYLATION OF COTTON. E. M. Buras, Jr., A. S. Cooper, and M. D. Cruz (Southern Regional Research Lab.). Anal. Chem. 30: 104-107 (Jan. 1958). (107)

Volumetric methods have been developed for rapid control analysis of acetic acid-acetic anhydride-perchloric acid and acetic acid-water-perchloric acid mixtures which occur in 3-component baths used in partial acetylation of cotton. Perchloric acid is titrated with potassium biphthalate solution. Water and acetic anhydride are determined empirically by phase separation in hydrocarbon solvent.

NO-IRON FINISH. H. A. Wannow (Cassella Farbwerke). Textile J. Australia 32: 936-940 (Oct. 20, 1957). (108)

Following a survey of the development of wash and wear finishes on cotton, the author reports on the use of Cassurit MLP as a crease resistant agent. 7 references.

FINISHING OF AGILON KNIT TEXTILES. W. A. Morris (British Nylon Spinners Ltd). Textile Wkly. 57(2): 1643-1644 (Dec. 6, 1957). (109)

Details of finishing procedures for Agilon hosiery and circular and warp knit fabrics are given.

STRETCH HALF-HOSE AND SOCK PROCESSING. Nylo-Plas Ltd. Hosiery Trade J. 64: 69 (Dec. 1957). (110)

On the Nylo-Plas combined steam and infrared heated plasticizer, stretch socks can be set in one operation.

CHEMICAL MODIFICATION OF NATURAL FIBERS. E. M. Buras, Jr. (Harris Research Labs.). Am. Dyestuff Reptr. 46: 929-930, 939-940 (Dec. 2, 1957). (111)

Some of the more practical and commercially feasible chemically modified cotton and wool fibers are described in terms of the chemicals needed for their production and the new properties imparted. Facts on past and current usage, and estimates on potential usage ranging up to 25 million pounds per year for some of these products, are given. Reasons for the slow acceptance of these chemical modifications are discussed. 28 references.

CREASE-RESIST FINISHING OF COTTON FABRICS. B. C. M. Dorset. Textile Mfr. 83: 574-577 (Nov. 1957). (112)

The effects of resin type (urea-formaldehyde, melamine-formaldehyde, and dimethylol ethylene urea resins), catalyst, and curing time on crease resistance and other fabric properties (e.g. chlorine retention and tensile strength) are discussed. Tables. Graphs.

PHYSICAL CHEMISTRY IN TEXTILE WASHING. W. Kling. SVF Fachorgan Textilveredlung 12, No. 2: 62-79 (1957). In German. Through BCIRA 37: 331 (1957). (113)

In this review, the author discusses the type of dirt, textile materials as dirt carriers, the characteristics of the water used, and the type and structure of detergents, with detailed reference to the washing process itself (wetting of the textile material and of the dirt, displacement of oily soils by the detergent solution, and removal of solid dirt from the fiber surface). 35 references.

NONAQUEOUS CARBOXYMETHYLATION OF COTTON. R. M. Reinhardt, T. W. Fenner, and J. D. Reid (Southern Regional Research Lab.). Textile Research J. 27: 873-878 (Nov. 1957). (114)

Cotton fiber, thread, and fabric were carboxymethylated by a nonaqueous process. Activated cotton was impregnated with an isopropanol solution of monochloroacetic acid and refluxed with 0.3% sodium hydroxide in a mixture of methanol and isopropanol. Degrees of substitution ranging up to 0.09 were achieved. Higher values can be obtained by retreatment or premercerization. Four varieties of cotton fiber were carboxymethylated by this method. Correlation between the reactivity and the original physical properties of the fibers is shown. Textile properties of fabric treated by this nonaqueous method and those of a sample treated by the usual aqueous alkali method are compared at equal substitution. Tables. Graph. Photomicrographs. 17 references.

FINISHING OF VINYLONS. PART 1. EFFECT OF RESIN FINISHING BY PHENOL SWELLING. T. Ueda. J. Soc. Textile Cellulose Ind. Japan 13, No. 4: 232-237 (1957). In Japanese (English summary). Through BCIRA 37: 453 (1957). (115)

The degree of swelling and the decrease of elongation and strength in Vinylon is investigated by using phenol as swelling agent. Subsequent application of urea-formaldehyde resin showed that the loss of strength in the pre-swollen Vinylon fabrics is partly compensated for by the resin finishing; the internal resin condensation is greater than in unswollen Vinylon; Vinylon and viscose spun rayon fabrics (50/50%) are of more practical value than 100% Vinylon fabrics; condensed resin finishing gives better results than the uncondensed resin.

IMPREGNATION FOR WATER REPELLENCY AND ITS LOGICAL USE WITH SYNTHETIC-RESIN FINISHING. H. Ruile (Chemische Fabrik Pfersee GmbH). Am. Dyestuff Reptr. 46: 947-952, 977 (Dec. 16, 1957). (116)

This article discusses the principles underlying water-repellent impregnation and synthetic resin finishing as well as their combined effect on the properties of the treated fabric. Photographs. Graphs. Tables. Translated from Melliand Textilber. 38: 313-319 (Mar. 1957).

SHRINKPROOF SHIRT POPLINS WITH STABLE LUSTER. R. Steidl. SVF Fachorgan Textilveredlung 11, No. 12: 692-698 (1956). In German. Through BCIRA 37: 325 (1957). (117)

The method described renders the cotton fabric shrinkproof and crease resistant, and its mercerization luster, increased by intermediate calendering, withstands numerous washings. No special machines are required, the finished fabric shows no folds, and its smooth surface reduces dirt deposition.

SCOURING OF BLENDED WORSTEDS CONTAINING POLYESTER FIBER. F. F. Elsworth and R. S. Hartley (Wool Industries Research Assoc.). (Letter to the editor). J. Soc. Dyers Colourists 73: 507-508 (Nov. 1957). (118)

Although in industrial processing the combing oil is applied principally to the wool component, it redistributes itself subsequently to blending, so that by the time the piece-scouring stage is reached it is fairly evenly distributed between the two fibers. Data are given which show that, while combing oils are readily removed from wool under the scouring conditions used, they are much less readily removed from polyester fiber, either alone or blended with wool, even though in the latter case the oils have been applied to the wool component only.

DYEING AND PRINTING D 2

DEVELOPMENTS IN DYEING AND PRINTING OF CELLULOSIC FIBERS. W. F. Rogers. Textile J. Australia 32: 882-885 (Sept. 20, 1957). (119)

The reactivity of Cibacron dyes with the cellulose molecule is explained, the characteristics of the dyed fabrics described, and methods of dyeing and printing outlined.

RELATIVE STABILITIES OF METAL DERIVATIVES OF oo'-DIHYDROXYAZO DYES. F. A. Snavely, W. C. Fernelius, and B. E. Douglas. J. Soc. Dyers Colourists 73: 491-495 (Nov. 1957). (120)

The relative stabilities of metal derivatives of oo'-dihydroxyazo dyes (terdentate groups) have been measured potentiometrically in dioxan-water (75:25 by volume). The order of stability of the metal derivatives agrees with that already reported in the literature for monodentate and bidentate groups. The coordinating power of the diarylazo compounds for a given metal is proportional to the acid dissociation constants of the chelating agents. The one o-hydroxy-o'-carboxyazo dye which has been studied forms less stable metal derivatives than the oo'-dihydroxyazo dyes and differs from them in coordinating with beryllium. Tables. Graphs. 10 references.

OXIDATION OF LEUCO COMPOUNDS TO VAT DYES. A. Schaeffer. Melliand Textilber. 38, No. 4: 428-431; No. 5: 533-537 (1957). In German. Through BCIRA 37: 417 (1957). (121)

The three phases during which the leuco compounds absorbed by the fiber are oxidized to vat dyes are discussed. The intermediate compounds which may form between the first and last phase are split during the soaping process at the end of the dyeing procedure, forming stable vat dyes. The behavior of the dyeings before and after soaping is described in detail, and an explanation is given for the formation of the intermediate compounds.

CALCULATION OF INDANTHRENE DYE CONCENTRATION OF IW- AND IN- DYES TO OBTAIN THE SAME COLOR DEPTH IN SUBSEQUENT BATCHES OF NON-MERCERIZED COTTON. E. Schneider. Textil-Praxis 12, No. 3: 270-276 (1957). In German. Through BCIRA 37: 321 (1957). (122)

Factors affecting the degree of substantivity of Indanthrene dyes at a liquor ratio of 1:20 are discussed and tables are given listing the following data: the liquor content of the vat, degrees of substantivity from 0-100% for a dye-liquor ratio of 1:20, effective (absolute) weights of the material, calculated weights of the material in dependence of the degree of substantivity and liquor ratio, and ratio of dye-liquor to the effective weight of the material. The use of the tables is explained and examples are given to show that it is possible to calculate fairly accurately the original dye concentration for subsequent batches of the same material.

DYEING SYNTHETIC FIBERS. F. J. Soday and W. H. Hindle (Chemstrand Corp.). Encyclopedia of Chem. Technology suppl. 1: 258-275 (1957). (123)

A survey, including spin dyeing, semisynthetic fibers, fully synthetic fibers, and new dyeing developments. 15 references.

VAPOCOL PROCESS OF CONTINUOUS DYEING. D. A. Garrett (Imp. Chem. Inds. Ltd). Can. Textile J. 74: 71-72 (Nov. 15, 1957). (124)

The Vapocol process is a method of continuously dyeing fabrics of acetate rayon, triacetate rayon, or Terylene with disperse and azoic dyestuffs, making use of trichloroethylene vapor as the dyeing medium. The process is outlined.

DYEING POLYACRYLONITRILE FIBERS BY THE CUPROUS ION METHOD. H. Rath, H. Rehm, H. Rummler and E. Specht. Melliand Textilber. 38, No. 4: 431-435; No. 5: 538-542 (1957). In German. Through BCIRA 37: 418 (1957). (125)

In this review, the authors discuss the structure and reaction mechanism of polyacrylonitrile fibers, technical dyeing methods, the chemistry of the cuprous-ion method, and dyeing techniques.

USE OF VAT DYES FOR POLYAMIDE FIBERS. E. Schönpflug. Melliand Textilber. 38, No. 4: 435-439; No. 5: 555-558 (1957). In German. Through BCIRA 37: 418 (1957). (126)

The dyeing behavior of polyamide fibers with different chemical and physical characteristics are compared, and factors affecting the dyeing and fastness properties of the fibers, with reference to dyeing techniques, dyeing of polyamide/cellulose mixtures with vat dyes, and uses of vat-dyed polyamide fibers are discussed.

DYEING ACCELERANTS FOR POLYESTER AND TRIACETATE FIBERS. W. Hees. Textil-Praxis 12, No. 4: 382-385 (1957). In German. Through BCIRA 37: 419 (1957). (127)

The action and chemical constitution of dye carriers are discussed and a review is made of known commercial products for polyester and triacetate fibers. Levegal PT can be used as a carrier in dyeing both polyester and triacetate fibers with disperse dyes of the Resolin type. The method is described and the advantages are enumerated.

DYEING DEVELOPMENTS IN CARPET TRADE. R. C. Cheetham (Courtaulds Ltd). Dyer 118: 821-822 (Nov. 22, 1957). (128)

The use of fiber blends requires novel techniques in dyeing and finishing. Recent developments in package and continuous dyeing, dyeing of staple, oiling and scouring, sizing, and mothproofing are briefly reviewed.

PRINCIPLES OF DYEING AND FINISHING ORLON. F. G. Parker. Textile Mfr. 83: 587-589 (Nov. 1957). (129)

Disperse and cationic dyes recommended for Orlon are listed, and dyeing, stripping, and leveling procedures for Orlon and Orlon blends are described.

DYEING PROBLEMS WITH RUBBERIZED FABRICS. Skinner's Silk & Rayon Record 31: 1327 (Dec. 1957). (130)

Problems encountered in dyeing rubberized fabrics in the presence of lead or copper are pointed out, and it is suggested that recommendations of dyemakers be closely followed. 5 references.

THEORY OF DYEING CELLULOSIC FIBERS. E. I. Valko (Onyx Oil & Chem. Co.). Textile Research J. 27: 883-898 (Nov. 1957). (131)

The theory of substantivity as it applies to dye absorption, kinetics of dyeing, and the transformation of the dye in the fiber is discussed. Diagrams. Graphs. 29 references.

WOOL DYEING WITH SULFUR DYES. H. Zukriegel. SVF Fachorgan Textilveredlung 12, No. 3: 153-156 (1957). In German. Through BCIRA 37: 322 (1957). (132)

The new method described for dyeing woolen articles with sulfur dyes (without measurable damage to the wool) consists in dissolving or vatting the dyes in dye baths or printing pastes by means of hydrogen-sulfide treated ethanolamines (preferably triethanolamine), their substitution products or derivatives, using organic bases, e.g. aliphatic, aromatic, or hydroaromatic amines or heterocyclic bases, to obtain the alkalinity required. The method is illustrated by practical examples. The increased infrared absorption of the sulfur dyes increases the heat-retaining power of the woolen textiles dyed in this way.

DYEING ACRYLIC FIBERS IN FLOCKS. H. Faldik. Z. ges. Textil-Ind. 59, No. 7: 250-253 (1957). In German. Through BCIRA 37: 322 (1957). (133)

The properties of acrylic fibers are briefly reviewed and directions are given for dyeing them with disperse, basic, and acid wool dyes. Reference is also made to the U-dyes of BASF (oxidizable amine dyes which give gray and brown shades) and to the use of vat dyes. Dyeing of fiber blends (precleaning of the acrylic fiber, aftertreatment, and choice of the dyeing method) is discussed.

MELANGE OR VIGOUREUX PRINTING OF WOOL: A METHOD FOR INCREASING THE RATE OF DYE FIXATION. J. Delmenico (Wool Textile Research Lab., C.S.I.R.O., Australia). Textile Research J. 27: 899-912 (Nov. 1957). (134)

The steaming time required for dye fixation has been reduced from the generally accepted 1 or 2 hr. at atmospheric pressure to a matter of minutes by the use of suitable solvents in the printing paste and by increasing the steam pressure. Besides increasing the rate of fixation, suitable solvents increased the depth of color obtained for a given amount of dye. Graphs. Tables. 20 references.

DYEING OF POLYAMIDE CRIMP YARN WITH INDOCARBON DYES. Reyon Zellwolle Chemiefasern No. 2: 101 (1957). In German. Through BCIRA 37: 322 (1957). (135)

Directions are given for precleaning and dyeing of Helanca yarn in black shades by means of Indocarbon dyes. The dyeings exhibit excellent lightfastness, very good crocking fastness in the dry and wet states, and are resistant to the thermofixing process with saturated steam.

DYEING POLYACRYLONITRILE FIBERS AND THEIR BLENDS. W. Schneider. Reyon Zellwolle Chemiefasern No. 3: 195-200 (1957). In German. Through BCIRA 37: 322 (1957). (136)

Directions are given for precleaning, bleaching and brightening, setting, and dyeing of fabrics from staple fiber and continuous filament (with disperse, basic, selected acid, Anthrasol, and Indigosol dyes) and equipment for piece dyeing at high temperatures is listed. Methods for dyeing mixtures of polyacrylonitrile and wool, cellulose, or polyamide are also described, and antistatic finishes for the dyed material are recommended.

CHEM-ACRIL PROCESS FOR THE UNION DYEING OF ACRILAN-WOOL BLENDS. W. H. Hindle (Chemstrand Corp.). Am. Dyestuff Reptr. 46: P968-P972 (Dec. 16, 1957). (137)

The latest development in the union dyeing of Acrilan/wool blends is called the Chem-acril process and involves addition of cationic and nonionic materials to the dyebath without pretreatments. These commercially available materials, in conjunction with sulfuric acid and dyestuffs selected from all the types of wool dyestuffs, yield union shades within dyeing times commercially accepted for wool. The cationic material, which is called Chem-acril, has several functions which are discussed in detail. Graphs.

DEVELOPMENT IN CONTINUOUS DYEING WITH VAT DYES. PART 2. H. Waibel. Textil-Praxis 12, No. 4: 377-382 (1957). In German. Through BCIRA 37: 417 (1957). (138)

The pad-steam installation, the standard Williams unit, the hot-oil process, the Standfast process, the Indanthrene continuous wet-steam process, and other continuous dyeing methods are described. A list of papers and patents referring to these processes (published 1947-1956) is appended.

DYEING HAIR PLUSHES. Dyer 118: 499-501 (Sept. 27, 1957); 739-741 (Nov. 8, 1957). (139)

Recommendations for dyeing camel hair, rabbit hair, and alpaca pile fabrics are given. The causes and prevention of secondary pile formation and the dyeing and cladding of alpaca pile fabrics are discussed.

MIKROFIX PIGMENT DYEING PROCESS. T. Weber. SVF Fachorgan Textilveredlung 12, No. 4: 211-224 (1957). In German. Through BCIRA 37: 450 (1957). (140)

Applicability, method, and the fastness properties of the dyeings are described. The process is limited to dyeing light to medium shades, but their excellent fastness properties compensate for this disadvantage. Suitable fibers and fabrics, dyes and binding agents, the possibility of combining the process with various finishing treatments, printing with Mikrofix dyes, and stripping of the dyeings are discussed.

PIGMENT DYEING BY THE PAD-JIG PROCESS. R. Vogel. Melliand Textilber. 38, No. 3: 310-313 (1957). In German. Through BCIRA 37: 290 (1957). (141)

Advantages and disadvantages of continuous dyeing and of the pad-jig process are discussed and a new pad-jig machine "krefeld" (Maschinenfabrik Gerber-Wansleben) is described, which produces more uniform dyeings, especially at the edges, since no migration of the dye takes place during rolling and storage of the cloth, and formation of a moiré effect is eliminated.

ADSORPTION OF DYES BY CELLULOSE ACETATES. A. Cameron, C. H. Giles and T. H. MacEwan. (Letter to the editor). J. Soc. Dyers Colourists 73: 511-512 (Nov. 1957). (142)

Recent experiments on the action of dyes upon monolayers of acetates and ketones on water are described in an attempt to explain some of the phenomena of dye adsorption by cellulose acetates. 6 references.

PREPARATION OF STENCILS IN SCREEN PRINTING. A. Franken. SVF Fachorgan Textilveredlung 11, No. 12: 676-686 (1956). In German. Through BCIRA 37: 323 (1957). (143)

The first stage of stencil preparation (transfer of the original design), covering materials (silk, metal, Vinyon, nylon, glass-gauze) and their characteristics, and stretching devices (stencil frames) and their mechanisms are described. The type, preparation, and use of stencil coatings are discussed, and a brief outline is given of the exposure procedure. The Astrasol process is described in greater detail, with reference to its faults.

CHEMICAL DYEING PROCEDURES IN SCREEN PRINTING. SVF Fachorgan Textilveredlung 11, No. 12: 687-691 (1956). In German. Through BCIRA 37: 420 (1957). (144)

Printing with vat dyes, with special reference to the sodium formaldehyde sulfoxylate method, is discussed.

PRINTING HANK YARN. PART 1. W. Sonnenschein. Textil-Praxis 12, No. 4: 389-392 (1957). In German. Through BCIRA 37: 420 (1957). (145)

The printing process (pretreatment of the yarn, preparation of the printing pastes, mechanism of the printing machine, drying, steaming, and condensing) is described, with reference to suitable dyes and the printing of synthetic fibers.

MECHANICAL PROCESSES D 3

PLEATS IN THEIR RIGHT PLACES. Geelong Wool Research Labs. Dyer 118: 743-744 (Nov. 8, 1957). (146)

The Si-Ro-Set process which is claimed to preserve a knife-edge crease in wool trousers, and crisp pleats in wool skirts, consists of spraying a weak solution of thioglycollic acid onto the garment, and then immediately steam pressing for a short period. Wetting by rain, spray from hose-pipe, or even prolonged immersion in water will not spoil the creases or pleats. They are not affected by commercial drycleaning, and show greatly improved durability in normal wear.

DRYING D 4

IMPROVED CHART FOR MASS FLOW OF AIR IN DRYING. T. J. Mitchell and J. C. Smith. Chemistry & Industry No. 22: 685-686 (1957). Through BCIRA 37: 422 (1957). (147)

Revised form of the triangular chart relating wet and dry bulb temperatures to the linear velocity of air leaving a dryer, originally described by Hyndman, McEwan, and Mitchell.

APPLICATION OF DRYING ACCELERATOR UNITS TO TENTER DRYING MACHINES. A. Ternent (Tomlinsons (Rochdale) Ltd). Dyer 118: 853-855 (Nov. 22, 1957). (148)

Heat necessary to heat air which either by design or accident enters or leaves the machine, i.e. exhaust air, and heat lost by radiation are the two most variable and yet controllable heat wasters on any drying machine. Methods of correcting these heat losses are discussed.

LABORATORY DRYER FOR HEAT-HARDENABLE RESIN FINISHES. SVF Fachorgan Textilveredlung 12, No. 4: 255-256 (1957). In German. Through BCIRA 37: 454 (1957). (149)

The new installation, described and illustrated, was developed by Ciba in collaboration with Sauter AG. The padded fabric can be dried by means of an air current, at a temperature adjustable to between 100 and 180° C, with an adjustable cloth velocity of 0.3-1.6 m/min. The continuous movement of the fabric prevents uneven migration and deposition of the resin.

TESTING AND MEASUREMENT E

MICROPHASE CONTRAST IN TEXTILE TESTING AND RESEARCH. H. Reumuth. SVF Fachorgan Textilveredlung 12, No. 1: 2-18 (1957). In German. Through BCIRA 37: 329 (1957). (150)

The optical principles of the phase contrast method and its effect, the phase apparatus and its components, and the use of the method, especially in the examination of fibers, raw and finished products, wash-liquor sediments, etc., are discussed.

PROJECTINA PROJECTION MICROSCOPE. W. T. Swatek. SVF Fachorgan Textilveredlung 12, No. 4: 256-258 (1957). In German. Through BCIRA 37: 457 (1957). (151)

The newest model of the Projectina can be used for examining raw materials (fiber identification, fibril counting, polarization, fiber measurement, detection of fiber damages, identification of silk weighting agents), filaments and yarns (regularity control, comparison of yarns, determination of degree of singeing, twist measurement and count determination), and fabrics (setting, weaving faults, reed marks, dye penetration, finishing quality, complaints, etc.).

EVALUATION OF THE EFFICIENCY OF TEXTILE TESTING DEVICES. H. Perner. Faserforsch. u. Textiltech. 8, No. 2: 70-74 (1957). In German. Through BCIRA 37: 329 (1957). (152)

Formulas are given for determining the degree of efficiency of the most important textile testers, taking into account objective (apparatus-dependent) and subjective (testing person) factors.

FIBERS E 1

ELECTRON MICROSCOPE STUDY OF THE SURFACE STRUCTURE OF COTTON FIBER. N. Ramanathan. J. Sci. and Ind. Research (India) 16: 436-440 (Oct. 1957). (153)

A new replica technique has been applied to the electron microscope study of the surface of the cotton fiber. The outermost component of the fiber is a layer of noncellulosic matter followed by a longitudinal fibrillar system and then a transverse network of fibrils. For the first time, layer-like structures, pits, and folds have been observed on replicas of the fiber. Photomicrographs. 11 references.

EVALUATION OF THE AIR-FLOW METHOD FOR MEASURING THE MEAN DIAMETER OF FIBER NOILS. S. L. Anderson. Bull. Inst. Textile France: 45-48 (Dec. 1956). In French. Through BCIRA 37: 329 (1957). (154)

Comparison was made of the mean fiber diameter in noils measured by the projection microscope and the air-flow method, respectively. The mean difference between the results of the two methods was 0.21 μ; the maximum error of the air-flow method applied to noils was less than 0.5 μ in this range.

QUANTITATIVE SEPARATION OF FIBERS. Weigel and Schön. Reyon Zellwolle Chemiefasern No. 3: 180-183; No. 4: 255-258 (1957). In German. Rayonne et Fibres Synthet. 13, No. 1: 53-64 (1957). In French. Through BCIRA 37: 458 (1957). (155)

Methods are recommended and described for the separation of wool/cotton (or rayon staple), wool/cellulose acetate, wool/Perlon, wool/polyacrylonitrile, wool/polyester, and wool/polyvinylchloride mixtures. Results of quantitative separations are presented in tables.

TESTING MOLECULAR STRUCTURE OF FIBERS. P. T. Barrett. Brit. J. Appl. Phys. Supplement No. 6: s64-69 (1957). Through BCIRA 37: 363 (1957). (156)

This paper is one of a group presented under the title "Physics of Nondestructive Testing."

RAPID IDENTIFICATION OF ARTIFICIAL AND SYNTHETIC FIBERS. W. De Smet and J. Gomes. Revue Textilis 13, No. 3: 15-22 (1957). In Dutch. Through BCIRA 37: 298 (1957). (157)

On the basis of different solubilities in various solvents at room and boiling temperature, respectively, methods are described for the separation and identification of cellulose acetate and triacetate, nylon, Perlon, Rislan, Rhovyl, PeCe, Vinyon HH, viscose, cuprammonium rayon, Lanital, Ardil, Vicara, Orlon, and Acrilan. 42 references.

ERRONEOUS READING ON THE PRESSLEY TESTER. F. W. Fleischle. Textil-Praxis 12, No. 4: 342-345 (1957). In German. Through BCIRA 37: 427 (1957). (158)

The Pressley tester generally gives readings that are too high owing to a certain flight and braking path of the sliding weight prior to its complete standstill. The effects of the inclination of the apparatus, friction coefficient, and distance between the nipping points are discussed, and it is shown that the scattering of the values can be reduced by adjusting the clamps to a nipping length of 1/8 inch.

PAPER CHROMATOGRAPHY OF REGENERATED PROTEIN FIBERS. J. Derminot. Bull. Inst. Textile France No. 65: 7-14 (Feb. 1957). In French. Through BCIRA 37: 459 (1957). (159)

The qualitative paper-chromatographic method described was found suitable for the identification of regenerated fibers from casein (Merinova and Fibrolane), ardein (Ardil), and zein (Vicara). It consists in comparing visually the chromatograms of the regenerated fibers with control chromatograms.

METHOD OF MEASURING THE MOLECULAR ORIENTATION IN FILAMENTS OF POLYETHYLENE TEREPHTHALATE USING DICHROIC DYESTUFFS. D. Patterson and I. M. Ward (Imperial Chemical Industries Ltd). Trans. Faraday Soc. 53: 1516-1526 (Nov. 1957). (160)

A method has been developed for measuring orientation factors in polyethylene terephthalate filaments using the dichroism of dyestuffs extruded with the molten polymer when the filaments are prepared. Orientation fabrics obtained in this way have been compared with those depending on the polarization anisotropy of the polymer molecules themselves as measured by the birefringence. Graphs. 15 references.

YARNS E 2

YARN TENSION AND ITS PROBLEMS: INTRODUCTION. PART 1. J. R. Wright (Uster Corp.). Textile Bull. 83: 53-56 (Nov. 1957). (161)

This introductory article is the first of a series concerning tension and its problems. The study on which the series is based has been undertaken as a means of compiling known information on the subject plus additional data determined through extensive field studies. Specific faults in tensions will be explained and illustrated graphically. The effects of these faults and methods for correction will also be covered. The Uster custom tension recordograph for accurate measurement and proper regulation of yarn tension is described, and its application explained. Photographs.

MEASUREMENT OF YARN CURLING TENDENCY. W. Frenzel and K-H. Banke. Faserforsch. u. Textiltech. 8, No. 4: 129-138 (1957). In German. Through BCIRA 37: 460 (1957). (162)

Experimental results show that the forces acting in transverse direction to the yarn axis (twisting moment) are responsible for the curling tendency of yarn. The apparatus developed for measuring the twisting moment as a criterion of the curling tendency of yarns is described and factors affecting the results are discussed. On the basis of experiences gained, a new device was designed for measuring the twisting moment on the running thread by means of a photoelectric arrangement. Comparison with the known untwisting method for determining the curling tendency showed the advantages of the new method. 15 references.

EXAMINATION OF SPUN YARN REGULARITY BY VARIOUS METHODS. W. Wegener and W. Zahn. Forschungsber. Wirtsch. u. Verkehrsmin. Nordrhein-Westfalen No. 302: 1-49 (1956). In German. Through BCIRA 37: 264 (1957). (163)

The existing yarn-regularity testing methods are qualitatively and quantitatively compared and a critical examination is made of the accuracy of the Textronograph. The diagrams obtained by the latter, the photocell, the mechanical scanning device, and the Viviani apparatus show good agreement. The relationships between mass distribution and breaking points and correlation of mass-, strength-, and twist-distribution are investigated, and the results discussed. The relationship between the variation coefficients determined by the above-mentioned testers is not constant and indicates no systematic dependence upon the material, yarn count, or twist. 14 references.

LENGTH VARIATION CHARACTERISTICS OF THE MASS AND TWIST OF A YARN. W. Wegener and H. Enneking. Textil-Praxis 12, No. 12: 337-338 (1957). In German. Through BCIRA 37: 430 (1957). (164)

Determination of length-variation curves on Cuprama SK (2.4 den.) yarn is described and the curves are compared. Contrary to the mass variations which increase with increasing test length, the twist variations extend only over small test length.

DETERMINATION OF SKEIN SHRINKAGE OF SPUN YARNS OF ORLON. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Nov. 1957. 4 p. Bull. OR-85 (replaces OR-71). Free. (165)

MEASUREMENT OF YARN HAIRINESS. A. Barella. Industrie Textile: 21-26 (Jan. 1957); 123-128 (Feb. 1957); 187-192 (Mar. 1957). In French. Through BCIRA 37: 300 (1957). (166)

In this review, the author discusses the theory of hairiness, distribution of hairiness over the yarn, methods of measuring the hairiness coefficient, and the effects of spinning and subsequent treatments (bleaching, sizing, singeing) on the yarn hairiness.

APPLICATION OF USTER EVENNESS TESTER. S. Firrao. Riv. Tissile 12, No. 12: 135-138 (1957). In Italian. Through BCIRA 37: 330 (1957). (167)

As an example of practical industrial application of the Uster regularimeter, a study is reported on the processing of Karnak cotton yarn (evaluation of the yarn quality and analysis of the yarn irregularity due to the individual processing stages).

FABRICS E 3

PORTABLE TENSILE STRENGTH TESTER. K. Higuchi and K. Kawada. J. Soc. Textile Cellulose Ind. Japan 13, No. 4: 225-228 (1957). In Japanese (English summary). Through BCIRA 37: 461 (1957). (168)

The tester consists of clamps holding the test piece, a loading mechanism, a recording mechanism, pressure-regulating equipment, and an air compressor. The load is measured on the principle of an air micrometer by the deflection of a leaf spring connected to the test piece. The stress-strain diagram of the test piece is recorded on paper by the air micrometer mechanism and the pulling mechanism. The sensitivity can be adjusted by changing the leaf spring or altering the distance between the two supporting points of the spring.

APPLICATION OF OIL IMMERSION METHOD TO STUDY OF STREAKS IN A WOOL/POLYESTER BLEND. R. Schneider. Bull. Inst. Textile France No. 65: 53-57 (Feb. 1957). In French. Through BCIRA 37: 460 (1957). (169)

Examination of a union fabric from wool and delustered polyester fibers revealed that the streaks found in this fabric were due to the irregular distribution of the constituents, intensified by the superposition of yarn-count irregularities. The visual perception of these irregularities was found to be due not to differences in dyeing but to differences in the degree of luster of the two fiber types.

MICROSCOPY OF FABRICS. N. Bigler. SVF Fachorgan Textilveredlung 12, No. 4: 224-238 (1957). In German. Through BCIRA 37: 460 (1957). (170)

Methods are reviewed, with special reference to cross-section analysis and examination of the fabrics by dividing the sample in successive layers for determining the raising effect.

BATH TOWELS. Consumer Bull. 41: 10-12 (Jan. 1958). (171)

Results of an absorbency study of 43 bath towels are given.

PERIODICALLY OCCURRING DEFECTS IN TEXTILES. K. Vogler. Textil-Rundschau 12, No. 3: 115-123 (1957). In German. Through BCIRA 37: 331 (1957). (172)

Fabric defects due to regularly arranged yarn sections with characteristics different from the normal material (mass differences in the yarn cross-section, tension differences, wetting differences, mechanical impurities, chemical and biological changes, etc.) are analyzed and illustrated by Uster diagrams and photographs.

FORMALDEHYDE EVOLUTION FROM TEXTILES. O. C. Bacon, M. F. Parker, and L. F. Horn (E.I. duPont de Nemours & Co., Inc.). Am. Dyestuff Reptr. 46: 933-936 (Dec. 2, 1957). (173)

A quantitative method for determining the amount of formaldehyde given off by textiles under varying conditions of storage is developed. A sample of fabric is stored in a gas-tight container with water or an aqueous solution of glycerine, depending upon the relative humidity expected in storage. The formaldehyde evolved is collected in the water or glycerine solution by isothermal distillation and determined quantitatively by visual colorimetric or spectrophotometric methods. Rate of formaldehyde evolution curves for dimethylol ethylene urea are given. Graphs. Table. 8 references.

NEW METHOD TO MEASURE KNITTED FABRIC SHRINKAGE. C. A. Baker (U.S. Testing Co.). Textile World 107: 112-114 (Dec. 1957). (174)

Results of tests measuring the recoverability of 68 knit fabrics under tension after laundering and tumble drying are presented. A knit-shrinkage gauge developed by the U.S. Testing Co. was used. Graphs.

ELECTROANALYSIS WITH CONTROLLED CATHODE POTENTIAL OF METALLIC COPPER APPLIED TO FABRICS AS METALLO-ORGANIC FUNGICIDES. J. Bubernak and A. D. Baskin (U.S. Army Quartermaster Research & Development Center). Textile Research J. 27: 878-882 (Nov. 1957). (175)

The method of electroanalysis by control of the cathode potential was applied successfully to the determination of copper in fabrics treated with organo-copper fungicides. No interference was encountered with antimony or iron. Control of the cathode potential was carried out manually with the use of a Beckmann model G pH meter connected with a commercial electrolyzer. Preparation of a sample of fabric for electroanalysis was easily and safely done using sulfuric and perchloric acids as oxidizing agents. Tables. Diagram. 8 references.

MEASUREMENT OF FABRIC HEAT RETENTION WITH A CALORIMETRIC APPARATUS. Kiger. Industrie Textile: 296-299 (Apr. 1957). In French. Through BCIRA 37: 461 (1957). (176)

The apparatus, consisting essentially of an electrically heated calorimeter and a temperature registering device, is described and results are listed for various categories of military fabrics. The figures show no direct relationship with the mathematical formula suggested by Canon Pinte (1944) for predicting the heat-protecting ability of fabrics.

CREASE RECOVERY ANGLE AS A FUNCTION OF TIME AND POSITION OF THE CREASE. W. Wegener. Melliand Textilber. 38, No. 4: 369-373; No. 5: 494-498 (1957). In German. Through BCIRA 37: 431 (1957). (177)

The measuring device and method described make it possible to determine accurately the crease-recovery angle over long and short periods. The dependence of the crease-recovery angle upon time and position of the crease is studied on rayon fabrics, and the experimental results are presented in three-dimensional phase diagrams, in which isochronism is reproduced as side elevations showing the effect of the crease position on the crease-recovery angle.

LIGHT AND ELECTRON MICROSCOPES LOOK AT A FABRIC. F. F. Morehead (American Viscose Corp.). Educational Focus 28: 4-11 (Nov. 1957). (178)

A series of 16 photomicrographs illustrates techniques of fabric analysis with the compound microscope and finally the electron microscope. 8 references.

OTHER E 4

ANALYSIS OF DYES ON FIBERS. A. Bode. Melliand Textilber. 38, No. 3: 289-296 (1957). In German. Through BCIRA 37: 291 (1957). (179)

Methods for testing dyeings on protein, cellulose, cellulose acetate, synthetic (polyvinyl chloride, polyamide, polyacrylonitrile, polyester, and mixed polymerizate) fibers and on blended yarns and fabrics are described, and tables are given listing the dyes, solvents, and behavior of the dyes on the respective fiber types.

TEMPERATURE DETERMINATION IN MACHINE SEWING NEEDLES. V. Pedersen. Tidsskr. Textiltek. 15. No. 5: 85-86 (1957). In Danish. Through BCIRA 37: 448 (1957). (180)

A description is given of apparatus produced by the Schmetz needle factory which has been used in studying the sewing of fabrics made from synthetic fibers.

MEASUREMENT OF ELECTROSTATIC CHARGES IN THE TEXTILE INDUSTRY. S. Tamai. J. Soc. Textile Cellulose Ind. Japan 13, No. 3: 152-158 (1957). In Japanese (English summary). Through BCIRA 37: 457 (1957). (181)

The apparatus is described and diagrams are given showing the electrostatic charge of wool, silk, cotton, and nylon in dependence of time and plate current.

COLORIMETRY FOR COLOR CONTROL. R. E. Derby, Jr. Man-Made Textiles 34: 67-68 (Dec. 1957). (182)

The use of the CIE international color system for color control is briefly reviewed.

APPLICATIONS OF COLOR PHYSICS TO TEXTILES. J. C. Guthrie and P. H. Oliver (Courtaulds Ltd). Textile Wkly. 57: 1414-1416, 1427 (Nov. 15, 1957); 1491-1493 (Nov. 22, 1957). (183)

The theory of color measurement, the use of spectrophotometers and colorimeters for color measurement and color matching, and methods of calculating colors resulting from blending are explained.

INDUSTRIAL ENGINEERING F

LOT COST SYSTEM. R. N. Walsh (Cranston Print Works). Am. Textile Reptr. 71: 15-19, 47-48 (Dec. 12, 1957). (184)

By means of the lot cost card system described the profit or loss on each lot may be quickly ascertained as soon as it is billed, and, by transferring detailed information to tabulating cards, soon after the end of each month, the results of operations for every customer during that period and for the year to date are made available to management. At the same time, statistical information regarding types of work, material and labor costs for printing and dyeing, yards sold of the various special finishes, etc., is available for analysis. Sample forms are illustrated.

COST ACCOUNTANT'S CONTRIBUTION TO SALES POLICY. H. Kennewell and A. Kershaw. Hosiery Trade J. 64: 84-87 (Dec. 1957). (185)

The contributions of the cost accountant in formulating sales policy include: an estimate of the direct costs and contribution to overheads and profit of each product under consideration; assessments of production resources absorbed by, and the profits expected from, alternative choices; and the provision of control procedures. These are examined in detail. Tables.

DETERMINATION OF NORMAL PRODUCTION TIMES BY STATISTICAL ANALYSIS AND WORK STUDY. H. W. Martin. Rayonne et Fibres Synthet. 13, No. 1: 83-94; No. 2: 203-218; No. 3: 305-313 (1957). In French. Through BCIRA 37: 403 (1957). (186)

MACHINERY AND MAINTENANCE F 1

MATERIALS HANDLING. Can. Textile J. 74: 57-71 (Nov. 29, 1957). (187)

Handle with care, by R. M. Ashner, p. 57-61; Greater emphasis on handling in the years ahead, by J. R. Bright, p. 62-65; The last frontier for cost cutting in textile operation, by L. S. Metcalfe, p. 66-67; What to look for in planning the handling system, by J. W. Hall, p. 68-71.

ELECTRICAL HANDBOOK FOR TEXTILE DRIVES. J. C. Marous. Westinghouse Electric Corp., Pittsburgh, Pa. 1957. 143 p. $4.00. (188)

SYNTHETIC RESIN-BONDED TEXTILE ROLLERS. Ferranti Ltd. Textile Wkly. 57: 1241, 1275 (Nov. 1, 1957). (189)

High strength to weight ratio, smooth surfaces, ready machineability, and resistance to mild acids and alkalis are the main points in favor of the use of synthetic resin-bonded cylinders in the textile industry. Production and properties are briefly described. Photographs.

MODERN ADJUSTABLE SPEED DRIVES. A. T. Bacheler. Textile Bull. 83. 82-85 (Dec. 1957). (190)

The basic features of the direct current, adjustable voltage drive are described. In addition, the characteristics of the constant speed, shunt-wound motor, the adjustable speed motor, the compound-wound motor, the series motor, and applications to various textile drive systems are discussed. Diagram. Graph.

WASTE DISPOSAL F 2

COLOR REMOVAL FROM AZO DYE WASTES. N. L. Nemerow and W. L. Wilson (North Carolina State Coll.). Ind. Eng. Chem. 49: 77A-78A (Dec. 1957). (191)

Stannous chloride is an effective reducing agent for removing color from azo dyes. Graphs. Tables.

SUPPLY, TREATMENT, AND DISPOSAL OF WATER IN THE DYEHOUSE. R. W. Richardson (Courtaulds Ltd). J. Soc. Dyers Colourists 73: 485-491 (Nov. 1957). (192)

An attempt is made to review briefly the many aspects of water--its supply, treatment, and disposal--from the point of view of dyehouse management and the dyer, rather than from that of the water-treatment specialist.

QUALITY CONTROL F 3

INDUSTRIELLE QUALITATSKONTROLLE: 50 BEISPIELE AUS DER PRAXIS. H. Lustig and J. Pfanzagl. Osterreichische Statistische Gesellschaft, Vienna, Austria. 1957. 119 p. In German. (193)

This book presents 50 examples of industrial quality control applications, demonstrating the use of sampling plans, control charts, significance tests, binomial probability paper, and the use of statistical techniques in setting tolerances realistically. Examples are taken from various industries, including textiles.

QUALITY CONTROL. PART 1. L. Bellwood. Wool Rev. 31: 27 (Sept. 1957); 37, 39 (Oct. 1957); 33, 35 (Nov. 1957). (194)

An examination of the stages at which control is to be exercized, and indications of the methods to employ in mill practice when dealing with woolen and worsted yarn and cloth manufacture.

QUALITY CONTROL IN INDUSTRY. P. J. Peyton. Textile Wkly. 57: 1335-1338, 1351 (Nov. 8, 1957). (195)

A discussion of the advantages to the textile mill of the statistical approach in sampling and testing for quality control.

OTHER F 4

REPORT ON MODERN PLANT LIGHTING. R. B. Pressley. Textile World 107: 97-103, 149, 210, 212 (Dec. 1957). (196)

This report on modern mill lighting includes information on basic lamp designs, methods of choosing fixtures, light distribution, 480/277-v. combined lighting and power systems, fluorescent light maintenance, and the effects of lighting on efficiency. Photographs. Diagram.

SCIENCES G

CHEMISTRY G 1

SOME PROPERTIES OF NATIVE HEMP, JUTE, AND KAPOK CELLULOSES. T. E. Timell (McGill Univ.). Textile Research J. 27: 854-859 (Nov. 1957). (197)

The general chemical composition of untreated fibers of hemp, jute, and kapok was studied, and the results were compared to the composition of the corresponding α-celluloses and of the cellulose nitrates obtained by direct nitration of the original materials. The results are compared to data obtained earlier for other bast and seed fibers. Tables. Graphs. 27 references.

CHEMISTRY OF CELLULOSE DEGRADATION. P. Rochas. Bull. Inst. Textile France No. 65: 15-40 (Feb. 1957). In French. Through BCIRA 37: 459 (1957). (198)

In this review, the author discusses the chemical nature of cellulose, chemical reactions in cellulose degradation, and methods for the identification of characteristic functions in degraded celluloses. 19 references.

EFFECT OF GAMMA-RADIATION ON CELLULOSE. R. E. Glegg and Z. I. Kertesz (Cornell Univ.). J. Polymer Sci. 26: 289-297 (Dec. 1957). (199)

A study of model systems of cellulose was undertaken to determine the degradation caused by gamma-radiation in the dosage range known to affect the texture of fruits and vegetables. Particular emphasis was placed on the effect of moisture content on degradation. Cotton and wood cellulose were irradiated. Table. Graphs. 17 references.

MOLECULAR AND CRYSTAL STRUCTURE OF CELLULOSE TRIACETATE. W. J. Dulmage (Eastman Kodak Co.). J. Polymer Sci. 26: 277-288 (Dec. 1957). (200)

An x-ray diffraction study. Graphs. 12 references.

FINE STRUCTURE OF KERATIN. E. H. Mercer (Chester Beatty Research Inst.). Textile Research J. 27: 860-866 (Nov. 1957). (201)

Results of the application of the technique of cutting thin sections for electron microscopy to the problem of the structure of hair and wool are presented. Photomicrographs. Diagrams. 17 references.

PHYSICAL ASPECTS OF STRUCTURE MODIFICATIONS IN POLYAMIDE FIBERS. L. Hermanne. Ann. Sci. Textiles Belges No. 4: 7-30 (Dec. 1956). In French. Through BCIRA 37: 299 (1957). (202)

The main physical effects of spinning, drawing, and heat-setting on the X-ray structure of polyamide filaments are discussed (number and arrangement of the spherulites in dependence of rate of cooling; behavior of the crystallites during drawing, effects of stabilization by heat treatment or immersion in swelling agents, and of annealing on the degree of crystallinity and orientation).

SWELLING AND SOLUTION OF SYNTHETIC FIBER-FORMING POLAR POLYMERS IN LIQUIDS. W. R. Moore. J. Soc. Dyers Colourists 73: 500-506 (Nov. 1957). (203)

The general principles governing the interaction of organic liquids and synthetic fiber-forming polymers (including cellulose acetate) are considered, and the factors which determine whether a liquid will dissolve or swell a given polymer are discussed. Tables. Graph. 13 references.

MOLECULAR ORGANIZATION IN KERATINS. PART 3. THE DENSITIES OF PHYSICALLY AND CHEMICALLY MODIFIED WOOLS. R. D. B. Fraser and T. P. MacRae (Wool Textile Research Labs., C.S.I.R.O., Australia). Textile Research J. 27: 867-872 (Nov. 1957). (204)

Information on the histological distribution of the crystalline material in wool and the effect of its complex molecular structure was sought by measuring the densities of a series of physically and chemically modified wools. The density determinations showed that extensions up to 70% and supercontraction of 15% in steam were not accompanied by density changes. In contrast, residues from chemical extractions and enzymatic digestions showed significant increases. Cortical cells fractionated from trypsin digests by gradient column techniques had densities comparable to that of porcupine quill tips. The extent to which these measurements may be correlated with crystallinity is discussed.

PREPARATION AND PROPERTIES OF REGENERATED CELLULOSE CONTAINING VINYL POLYMERS. PART 3. MOISTURE RELATIONS. G. Landells, J. A. Leathley, and C. S. Whewell (Leeds Univ.). J. Soc. Dyers Colourists 73: 496-500 (Nov. 1957). (205)

Large quantities of hydrophobic vinyl polymers deposited inside viscose rayon fibers reduce water imbibition comparatively slightly, but hydrophilic polymers increase the imbibition. Measurements of the absorption-desorption isotherms of fibers containing various polymers show that deposition of polymethyl methacrylate or polystyrene produces little effect on the moisture contents calculated on the weight of cellulose. Introduction of hydrophilic polymers increases the moisture contents of the fibers. Graphs. Tables. 2 references.

REACTION OF THE CYSTINE OF WOOL WITH FORMALDEHYDE. S. Blackburn (Wool Industries Research Assoc.). (Letter to the editor). J. Soc. Dyers Colourists 73: 506-507 (Nov. 1957). (206)

SURFACE OF THE COTTON FIBER. PART 3. EFFECTS OF MODIFICATION ON SOIL RESISTANCE. B. R. Porter, C. L. Peacock, V. W. Tripp, and M. L. Rollins (Southern Regional Research Lab.). Textile Research J. 27: 833-845 (Nov. 1957). (207)

Experiments designed to complement microscopical studies and to attempt a practical evaluation of the effectiveness of various agents which impart resistance to dry soil, as well as chemical modification (e.g. acetylation, carboxymethylation, cyanoethylation, mercerization), are reported. Results were interpreted from reflectance data and from radioactive tracer assays of weight of soil takeup. In attempting to elucidate the mechanism of dry soiling, the effects of textile construction, electrical charge on the fiber, particle size of soil as related to topography of fiber surface, surface hardness, reducing surface roughness, and lowering surface energy were considered. It was shown that soil takeup is directly related to specific surface. The most successful types of antisoiling agents for dry soils appear to be colloidal particulate applications such as silica or alumina, and additive finishes which lower surface energy of the fiber. Tables. Graphs. Photomicrographs. 31 references.

APPLICATIONS OF ORGANIC DIISOCYANATES AND THEIR DERIVATIVES IN THE TEXTILE INDUSTRY. P. Rochas and M. Coupez. Bull. Inst. Textile France No. 64: 15-27 (1956). In French. Through BCIRA 37: 325 (1957). (208)

A review of the use of organic diisocyanates (toluylene and hexamethylene diisocyanates and their water-soluble derivatives) as cross-linking agents for hydrophilic polymers to reduce their swelling rate in water, as adhesives for bonding glass fibers to vinyl coating, and in waterproofing of textiles treated with a product obtained by the reaction of diisocyanate with an alcohol, amine, or fatty acid. 18 references.

HOW TO PREPARE AND USE RADIOACTIVE SOILS. J. M. Lambert, J. H. Roecker, J. J. Pescatore, G. Segura, Jr., and S. Stigman. Nucleonics 12: 40-42 (Feb. 1954). (209)

One difficulty in testing detergents for soil-removing qualities in the laboratory has been the problem of detecting soiling agents on the cleaned substrates. The authors discuss three types of labeled soils that can easily be measured.

SYNTHETIC DETERGENTS AND EMULSIFIERS UP TO DATE. 4th revision. PART 1. J. W. McCutcheon. Soap Chem. Specialties 33: 59-68 (Dec. 1957). (210)

This is the fourth revised table of American trade name products in the field of detergents, emulsifiers, and other surfactants. Information given includes tradename, manufacturer, class and formula, main uses, form, percent concentration, type, and remarks.

DETERGENTS. A. M. Schwartz (Harris Research Labs). Encyclopedia of Chem. Technology suppl. 1: 190-223 (1957). (211)

A survey article covering detergent components and their functions, detergent formulations for various cleansing operations, recent advances in the measurement of detergency, and mechanisms and theory of detergency. 54 references.

CYANOETHYLATION. G. E. Journeay (Monsanto Chem. Co.). Encyclopedia of Chem. Technology suppl. 1: 177-190 (1957). (212)

This summary article on cyanoethylation includes a long section on cyanoethylated cotton. 85 references.

PHYSICS G 2

SOME APPLICATIONS OF RADIOACTIVITY IN THE TEXTILE INDUSTRY. J. Joly. Bull. Inst. Textile France No. 65: 61-77 (Feb. 1957). In French. Through BCIRA 37: 458 (1957). (213)

Review of the use of radioactive tracers in textile research, control methods based on radioactivity, elimination of static electricity, and the irradiation of high polymers to modify their structure. 76 references.

TRACER TECHNIQUES IN FIBER RESEARCH. H. J. White, Jr. (Textile Research Inst.). Anal. Chem. 29: 1744-1747 (Dec. 1957). (214)

A brief review of applications of tracers in fiber research is given. Emphasis is primarily on applications involving textile fibers, but some examples involve fibers in paper and biological systems. Tracers are applied to studies in mechanical processes and chemical processes and to fibers either in bulk form or singly. Graphs. Diagrams. 29 references.

RADIOISOTOPES IN INDUSTRIAL RESEARCH AND PROCESS CONTROL. J. L. Putman. RADIOTRACERS IN THE INDUSTRIAL CHEMICAL FIELD. G. B. Cook. J. Roy. Inst. Chem. 80: 694-706, 706-717 (Dec. 1956). Through BCIRA 37: 260 (1957). (215)

The first paper (32 references) reviews recent developments in the application of radioisotopes to such industrial problems as thickness measurement, leak detection, and wear testing. In the second paper (54 references), analytical and other chemical uses of radioactive tracer techniques in industry are surveyed.

BIOLOGY G 3

MICROSCOPIC OBSERVATIONS ON COTTON FIBERS SUBJECTED TO ENZYMATIC DEGRADATION. P. B. Marsh (U. S. Agric. Research Service). (Letter to the editor). Textile Research J. 27: 913-916 (Nov. 1957). (216)

The probable causes of the helical and transverse cleavage of cellulose fibers exposed to the action of filtrates from the growth of M. verrucaria are discussed. Photomicrographs. 9 references.

MISCELLANY H

PLASTICS: THE YEAR 1957 IN REVIEW. Modern Plastics 35: 153-170, 234-247 (Jan. 1958). (217)

Review with 695 references.

COTTON IN INDIA. A. E. Haarer. Fibres 18: 359-362 (Nov. 1957). (218)

The history of the cotton industry in India is described, including the new policies which have followed partition. Photographs. Table.

SUCCESSFUL RESEARCH REQUIREMENTS. M. E. Heard. Am. Textile Reptr. 71: 21, 48 (Dec. 12, 1957). (219)

The need for a research organization and its place in the textile mill is explained.

HIGHLIGHTS OF THE PAST YEAR. P. J. Wood. Am. Dyestuff Reptr. 46: 920-928 (Dec. 2, 1957). (220)

Developments in singeing, bleaching, dyeing, finishing, printing, washing, and drying machines, instruments, and laboratory apparatus are reviewed. Photographs. Diagrams.

TEXTILE TERMS. Institut Textile de France. Bull. Inst. Textile France No. 65: 79-101 (Feb. 1957). In French. Through BCIRA 37: 470 (1957). (221)

Alphabetical list of French terms and their English equivalents, based upon the Textile Institute's Textile Terms and Definitions, is given.

CAN WOOL MEET THE CHALLENGE? Textile Merc. 137: 805-806, 829 (Nov. 15, 1957). (222)

In considering the problems of competing with the manmade fibers and modified cottons, the difficulties involved in conferring "easy-care" properties on wool while retaining its distinctive properties are examined.

DEVELOPMENTS IN U. S. TEXTILES: A SURVEY OF THE ECONOMIC EFFECTS. P. A. Mars (Brit. Rayon Res. Assoc.). Textile Wkly. 57(2): 1636-1640 (Dec. 6, 1957). (223)

An account of some of the economic and technical reasons for the changes that have taken place in the woolen, yarn and thread, broad woven fabric, knitting, and carpet and rug industries is given.

ONE-DAY CONFERENCE ON TEXTILE INFORMATION. Aslib Textile Group and Textile Institute. Aslib Proc. 8, No. 3: 165-194 (1956). Through BCIRA 37: 63 (1957). (224)

Three papers read at the joint meeting of the Aslib Textile Group and the Textile Institute (held in March, 1956) are presented: Information within the mill, by A. W. Bayes, p. 165-168; Statistical and economic information on textiles, by R. Robson, p. 169-176; Textile information: how and where to find it, by V. D. Freedland, p. 177-189; Guide to textile literature, p. 190-194.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

COTTON BALE SAMPLER. G. N. Franks. USP 2 812 555, Nov. 12, 1957. (225)

Apparatus for obtaining, during the ginning of a bale, a series of cotton batt layers comprising a representative cross-section.

MANMADE FIBERS A 2

IMPROVING ACRYLONITRILE POLYMERS. Farbwerke Hoechst AG. BP 777 304, June 19, 1957. Through BCIRA 37: 456 (1957). (226)

The heat resistance of acrylic fibers can be improved by treatment with hydrofluoboric acid or its salts. The treatment may be combined with a fixing, crimping, or dyeing process.

PREPARATION OF ACRYLONITRILE POLYMER TOW. W. O. Young, Jr. (to E.I. du Pont de Nemours & Co.). USP 2 811 770, Nov. 5, 1957. (227)

Guiding arrangement for preparing a continuous filament tow from a number of smaller tows overlapped to prevent splitting.

SPINNABLE KERATIN SOLUTIONS. L. R. B. Hervey (to Rubberset Co.). USP 2 814 851, Dec. 3, 1957. (228)

Natural keratin-containing material (e.g. chicken feathers, hair, animal horns and hoofs, etc.) are heated with a solvent in the presence of a reducing, disulfide-splitting agent in order to extract certain portions of the keratin. The extracted keratin is precipitated by cooling and redissolved in a solvent capable of producing a homogeneous, translucent, highly concentrated solution of keratin suitable for spinning or extrusion into fibers and filaments.

YARN PRODUCTION B

CRIMPED NYLON YARN. G. Coudène (France). BP 755 597, Aug. 22, 1956. Through BCIRA 37: 412 (1957). (229)

Crimped nylon yarn for hosiery is made by imparting a high twist, de-twisting to about the original degree of twist, and heat-setting while in the form of hanks or packages wound on flexible supports.

DRAFTING A STAPLE FIBER RIBBON FROM A RIBBON OF ENDLESS FILAMENTS. Joh. Jacob Rieter & Cie AG. BP 776 388, June 5, 1957. (Addition to BP 727 782). Through BCIRA 37: 410 (1957). (230)

The ribbon guide and heating element are combined to give heating before breaking.

CRIMPED NYLON YARNS. Setar AG. BP 776 898, June 12, 1957. Through BCIRA 37: 412 (1957). (231)

Crimped nylon yarn is made by twisting and fixing, twisting a greater amount in the reverse direction, winding into hanks while allowing free stretching or shrinkage, and fixing at a temperature at least 30° C higher than the first stabilizing treatment.

MANUFACTURE OF BULKED YARNS. R. H. Speakman (to Imperial Chemical Industries Ltd). BP 777 625, June 26, 1957. Through BCIRA 37: 443 (1957). (232)

Bulked yarns, e.g. of Terylene, are made by twisting, heat setting, and untwisting during the drawing of the filaments to several times their length as spun.

APPARATUS FOR STRETCHING SYNTHETIC FILAMENTS AND YARNS. J. W. Phipps (to Imperial Chemical Industries Ltd). BP 778 076, July 3, 1957. Through BCIRA 37: 443 (1957). (233)

A single main drive actuates all the feed rollers, and each draw roller is driven from the drive shaft of the corresponding feed roller.

YARN CLEARER. H. L. Bowie. USP 2 814 176, Nov. 26, 1957. (234)

Pneumatic means for cleaning and for preventing accumulation of dirt and lint on yarn during spinning, carding, or winding.

APPARATUS FOR CRIMPING A TOW OF EXTENDABLE ARTIFICIAL FILAMENTS. I. F. Stewart and H. R. Aikman (to Imperial Chemical Industries Ltd). USP 2 814 837, Dec. 3, 1957. (235)

Method of crimping the filaments of a continuously traveling tow of synthetic protein fibers by intermittently relaxing lengths of the tow while it is being fed forward under continuous stretching.

OPENING, PICKING, FIBER PREPARATION B 1

APPARATUS FOR REMOVING DUST AND GRANULAR MATERIAL FROM ASBESTOS FIBER. W. D. Sheldon, Jr. USP 2 813 306, Nov. 19, 1957. (236)

CARDING AND COMBING B 2

COMBING MACHINE DRIVE. C. Schleifer (Italy). BP 755 889, Aug. 29, 1956. Through BCIRA 37: 410 (1957). (237)

To reduce torque on the drawing roller of a detaching-roller unit, the roller is driven from both ends.

CARDING SYNTHETIC FIBERS. Badische Anilin- & Soda-Fabrik AG. BP 776 477, June 5, 1957. Through BCIRA 37: 410 (1957). (238)

The carding apparatus is enclosed and the fibers are in a substantially or completely dry condition. The stiffness and bundle elasticity of the fibers in the dry state are sufficient to prevent obstruction of the apparatus. Antistatic agents must be used.

CONDENSERS FOR WOOL CARDING MACHINERY. R. B. Brooke (to Redshaw & Co. Ltd). BP 776 549, June 12, 1957. Through BCIRA 37: 410 (1957). (239)

DRAWING AND ROVING B 3

SLIVER SELVAGE GUIDE. W. A. Hunter (to T. M. M. (Research) Ltd). BP 755 348, Aug. 22, 1956. Through BCIRA 37: 410 (1957). (240)

Molded selvage guide for a sliver passing through or towards the drafting zone of a draw-frame or of the draw-box of a comber.

DRAFTING MECHANISM. G. F. Raper (to T. M. M. (Research) Ltd). BP 755 349, Aug. 22, 1956. Through BCIRA 37: 410 (1957). (241)

Drafting of twistless slivers of worsted and other materials of similar staple length.

TOP ROLL CARRIER. W. H. Watson, R. J. Summers and J. Osbaldeston (to T. M. M. (Research) Ltd). BP 755 656, Aug. 22, 1956. Through BCIRA 37: 411 (1957). (242)

Drafting apparatus in which the upper elements are carried by an arm pivoted to a fixed part at the rear of the roller stand. To secure the arm in its operative position it is fitted with a hook that, by a lever device, can be made to engage a detent, or be released.

DRAFTING EVENER MECHANISM. J. H. Coulliette (to Industrial Research Institute of the University of Chattanooga). USP 2 812 553, Nov. 12, 1957. (243)

Electronic drafting control for ensuring uniform mass per unit length of sliver, roving, lap, etc.

DRAFTING HEAD FOR CRIMPED FIBERS. O. E. Sandelin (to Warner & Swasey Co.). USP 2 813 307, Nov. 19, 1957. (244)

Control of crimped fiber movement during drafting to eliminate bunching and avalanching.

TOP DRAFTING ROLL WEIGHTING. M. M. Waldrop (to Medley Manufacturing Co.). USP 2 813 308, Nov. 19, 1957. (245)

Means for adjusting the mounting of a spring weighted overarm to provide proper alignment for the bottom and top rolls at all times.

DRAWING MECHANISM. P. B. West and G. C. Anderson (to Saco-Lowell Shops). USP 2 813 309, Nov. 19, 1957. (246)

Overarm weighting mechanism for applying predetermined pressure on a series of top rolls in a drawing frame, as well as means for detecting a lap up caused by winding up of sliver and actuating the stop motion mechanism of the frame.

TOP DRAFTING ROLL WEIGHTING. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 814 839, Dec. 3, 1957. (247)

Hook-shaped coupling for top roll saddle weighting assembly which can connect or disconnect the weighting hook and saddle assembly and also apply or remove the weight on the saddle assembly.

FLYER TOP ATTACHMENT. H. Berberich (Germany). USP 2 814 926, Dec. 3, 1957. (248)

Detachable flyer top attachment for increasing the twist imparted to the roving between the delivery rollers and the flyer top.

SPINNING, WINDING, TWISTING B 4

CENTRIFUGAL SPINNING MACHINE. F. Wright (to Prince-Smith & Stells Ltd). BP 755 131, Aug. 15, 1956. Through BCIRA 37: 411 (1957). (249)

Recovering the mass of yarn built up against the wall of the rotary container of a centrifugal machine by stopping the container and allowing the mass of twisted stock to collapse on a support.

LUBRICATION OF SPINNING AND TWISTING FRAME RING. W. Dick (to Eadie Bros. & Co. Ltd). BP 755 454, Aug. 22, 1956. Through BCIRA 37: 411 (1957). (250)

The annular groove in the outer surface of the ring is connected with the inner bearing surface by two or more pairs of passages and with the upper bearing surface by other pairs of passages, and a single wick in the groove is laced through each pair of passages.

YARN TENSION DEVICE FOR CABLING SPINDLES IN WHICH YARN FROM A DELIVERY BOBBIN TRAVELS AXIALLY THROUGH THE BOBBIN. Barmer Maschinenfabrik AG. BP 755 588, Aug. 22, 1956. Through BCIRA 37: 411 (1957). (251)

YARN PACKAGE CARRIER. K. C. Jackson and T. B. Frearson (to British Celanese Ltd). BP 755 874, Aug. 29, 1956. Through BCIRA 37: 414 (1957). (252)

YARN GUIDE FOR TWISTING FRAMES. Brevets Aéro-Méchaniques SA. BP 776 199, June 5, 1957. Through BCIRA 37: 412 (1957). (253)

ELECTRICAL DRIVES. F. B. Holt, G. P. F. Newlands and A. Cotton (to Metropolitan-Vickers Electrical Co. Ltd). BP 776 685, June 12, 1957. Through BCIRA 37: 412 (1957). (254)

Means for interrupting the drive of ring spinning and twisting machines between the winding of successive layers of yarn.

FLYER TYPE SPINNING MACHINE. W. S. Robson (to Fairbairn Lawson Combe Barbour Ltd). BP 777 071, June 19, 1957. Through BCIRA 37: 446 (1957). (255)

The power used and the heat dissipated are reduced by providing the bobbin with a seating that is able to rotate at a lower rate than the bobbin.

MULE SPINNING MACHINE. W. S. Robson (to Fairbairn Lawson Combe Barbour Ltd). BP 777 126, June 19, 1957. Through BCIRA 37: 446 (1957). (256)

Adjustment of faller screws in machines having screw-operated pin faller heads for controlling the drafting of fibers.

BOBBIN FOR WINDING POLYAMIDE YARNS. M. Scaglia SpA. BP 777 289, June 19, 1957. Through BCIRA 37: 448 (1957). (257)

A flanged bobbin with a metal barrel is described.

SPINNING, DOUBLING, TWISTING, AND WINDING MACHINES. A. W. Stafford (to T. M. M. (Research) Ltd). BP 777 360, June 19, 1957. Through BCIRA 37: 447 (1957). (258)

Machines with two tiers of spindles have rotary elements that maintain the driving belts constantly at the same tension.

TRAVERSE MECHANISMS FOR WINDING AND UP-TWISTER MACHINES. E. P. R. Scragg (to Ernest Scragg & Sons Ltd). BP 777 364, June 19, 1957. Through BCIRA 37: 447 (1957). (259)

RING SPINNING MACHINES. K. Ward (to Fairbairn Lawson Combe Barbour Ltd). BP 777 480, June 26, 1957. Through BCIRA 37: 446 (1957). (260)

Adaptable reciprocating motion of the ring rail enabling any one of several yarn package forms to be produced.

WINDING MACHINES. Schweiter (Maschinenfabrik) AG. BP 777 752, June 26, 1957. Through BCIRA 37: 448 (1957). (261)

Device for controlling the laying of the thread during winding on quick-traverse frames.

RING SPINNING FRAMES WITH VARIABLE SPEED DRIVES. Brematex. BP 777 526, June 26, 1957. Through BCIRA 37: 446 (1957). (262)

The speed at which the frame is driven is automatically reduced when the ring rail reaches its end position, upwardly or downwardly.

YARN GUIDE FOR TWISTING. R. Hill (to S. Bourne & Co. Ltd). BP 777 843, June 26, 1957. Through BCIRA 37: 447 (1957). (263)

Broken yarn on doubling and twisting machines is guided to a cutter and prevented from being wound by the adjacent yarn onto the wrong bobbin.

TUBES FOR SPINNING AND WINDING. R. Julien (Belgium). BP 778 375, July 3, 1957. Through BCIRA 37: 448 (1957). (264)

The tubes have a surface with alternate raised embossed and plain areas.

EVEN-LENGTH PACKAGES ON TWISTING AND WINDING MACHINE. E. Kinsella and E. W. Poole (to British Celanese Ltd). USP 2 814 175, Nov. 26, 1957. (265)

Even-length packages are obtained from multi-spindle twisting machines by obstructing the rotation of each balloon about the takeup package at regular intervals so as to break the balloon and stop winding to permit doffing.

SPINNING MACHINE FLYER. G. Meyer-Busche (Germany). USP 2 814 177, Nov. 26, 1957. (266)

Bell-shaped plastic flyer with two narrowing arms extending down from its hood, one of which has a thread guide channel in its interior.

BRACKET FOR TOP ROLL CARRIER IN SPINNING MACHINES. E. Dausch (to SKF Kugellagerfabriken). USP 2 814 838, Dec. 3, 1957. (267)

TWISTING AND PLYING SPINDLE BALLOON CONTROL. A. W. Vibber. USP 2 814 925, Dec. 3, 1957. (268)

Automatic strand tension control device which varies the tension of the strand issuing from the balloon and approaching the plying junction in response to changes in the shape of the balloon.

APPARATUS FOR WINDING THREAD ON PLASTIC SEWING MACHINE BOBBINS. R. R. Cone (to Threads Inc.). USP 2 815 178, Dec. 3, 1957. (269)

FABRIC PRODUCTION C

EMBROIDERY MACHINES. Maschinenfabrik Benninger AG. BP 777 550, June 26, 1957. Through BCIRA 37: 448 (1957). (270)

Threads cut to appropriate length are pulled through the embroidery fabric.

BRAIDING MACHINES. E. Carter (to B. & F. Carter & Co. Ltd). BP 777 841, June 26, 1957. Through BCIRA 37: 448 (1957). (271)

Tension variation in the threads is largely prevented.

YARN TENSION DEVICE. R. L. Carroll. USP 2 813 687, Nov. 19, 1957. (272)

Arcuate hook-shaped yarn engaging mechanism for controlling yarn travel between relatively fixed and relatively movable guide members.

YARN BRAKING APPARATUS. V. Svatý and L. Tatícek (to Mira, nar. pod.). USP 2 813 688, Nov. 19, 1957. (273)

Apparatus for braking a yarn consists of a braking disc and several braking rollers attracted to the braking disc by means of a magnet.

WARPING, SLASHING, YARN PREPARATION C 1

DRIVING WINDING-ON BEAMS. Gebrüder Sucker GmbH. BP 755 372, Aug. 22, 1956. Through BCIRA 37: 414 (1957). (274)

Two winding-on beams arranged end to end are driven through differential gearing; the driving member drives the planet wheels and the sun wheels drive the beams.

SIZE HEATING AND BOILING VESSELS. R. Farnworth (to Richard Farnworth & Co. Ltd). BP 776 068, June 5, 1957. Through BCIRA 37: 414 (1957). (275)

Boiling and mixing starch size in a steam-jacketed pan, and subjecting it at its upper surface to a cushion of steam.

FEELER ACTUATED ADVANCING MECHANISM FOR A PIRN WINDER OSCILLATING YARN GUIDE. J. R. Grady (to Muschamp Engineers Ltd). BP 776 354, June 5, 1957. Through BCIRA 37: 414 (1957). (276)

WINDING APPARATUS. A. J. Ensor (to Ensor Ltd). BP 776 828, June 12, 1957. (Addition to BP 697 340). Through BCIRA 37: 414 (1957). (277)

Metering reel, for measuring the length of yarns or wires wound side by side, has a non-slip surface.

WARPING MACHINERY STOP MOTION ASSEMBLY. E. M. Ayars, Jr., G. W. Beyers, R. D. Heffelfinger and J. A. Truitt (to American Viscose Corp.). USP 2 814 088, Nov. 26, 1957. (278)

Double acting stop motion device for terminating the beaming operation when the yarns being wound on the spool or beam are running under excess or insufficient tension.

WEAVING C 2

SELF-THREADING ATTACHMENTS FOR SHUTTLES. W. Clegg. BP 776 622, June 12, 1957. Through BCIRA 37: 416 (1957). (279)

SHUTTLE CHANGING MECHANISMS. Société des Mouvements Automatiques Poncet. BP 753 072, July 18, 1956. Through BCIRA 37: 289 (1957). (280)

Shuttle changing mechanism for a multi-shuttle loom, comprises a system of oscillating levers (as many as the shuttles) actuated by a cam shaft, tappet chain, or like gearing in unison with the weave, but with an advance with respect to the weave of one or more cycles of the movement of the lay.

WEAVING MULTI-PLY FABRICS EMBODYING FRICTION ELEMENTS. F. Hindle (to Turner Brothers Asbestos Co. Ltd). BP 753 330, July 25, 1956. Through BCIRA 37: 289 (1957). (281)

The plies are woven together and simultaneously united, face to face, by binder threads of which there is one for every two warp threads. Each binder thread passes round every alternate face weft pick and lies between two face warp ends that pass on the inside of that pick. A friction element is made by impregnating the fabric with a plastic or other suitable agent.

WEAVING CENTER SELVAGES. Société d'Applications Générales d'Electricité et de Mécanique. BP 755 090, Aug. 15, 1956. Through BCIRA 37: 415 (1957). (282)

Device, incorporating an electromagnetically oscillated needle, for weaving a center selvage on a circular loom.

INTERMITTENT TEMPLE THREAD CUTTER FOR AN AUTOMATIC WEFT-REPLENISHING LOOM. H. Kluftinger (Germany). BP 755 152, Aug. 15, 1956. Through BCIRA 37: 415 (1957). (283)

JACQUARD LOOM. E. Grosse (Germany). BP 755 184, Aug. 15, 1956. Through BCIRA 37: 416 (1957). (284)

Means for retaining the shed formation on a jacquard loom fitted with a weft stop-motion and with an automatic reversing motion for the lay.

CIRCULAR LOOM WITH MECHANISMS FOR VARYING WEFT DENSITY. Société d'Applications Generales d'Electricité et de Mécanique. BP 755 317, Aug. 22, 1956. Through BCIRA 37: 415 (1957). (285)

Producing regularly spaced bands of different weft density, especially reinforcing bands of higher weft density in tubular fabric for sacks.

MAGAZINES FOR AUTOMATIC WEFT-REPLENISHING LOOMS. H. D. Hall and E. Kay (to Hall & Kay Ltd). BP 755 631, Aug. 22, 1956. Through BCIRA 37: 416 (1957). (286)

TWO OR MORE SHUTTLE LOOMS WITH AUTOMATIC WEFT SUPPLY. L. J. Defraiteur (to Ateliers Houget SA). USP 2 814 316, Nov. 26, 1957. (287)

Mechanism for effecting automatic cop changing, without loom stoppage, during weaving with two shuttles pick and pick (and for all combinations of picks in two or more colors) while still permitting alternation of even and odd picks.

WEFT REPLENISHING APPARATUS. Georg Fischer AG. BP 771 374, Apr. 3, 1957. Through BCIRA 37: 289 (1957). (288)

Mechanism for and movement of a rotatable cop magazine carrying cops of different character or color.

TEMPLES WITH WEFT THREAD CUTTING DEVICES. E. Kenk. BP 771 424, Apr. 3, 1957. Through BCIRA 37: 289 (1957). (289)

Device characterized by a tube, perpendicular to the cloth, that has a displaceable cutting bolt.

WARP STOP MOTION. E. Baugnies (France). BP 771 928, Apr. 10, 1957. Through BCIRA 37: 289 (1957). (290)

The device, which is placed between the reed and the harness, maintains its place for its whole height whatever the angle of shed, and has antifouling extensions.

WEAVING CARPETS ON A SPOOL AXMINSTER LOOM. W. Hill (to William Hill (Kidderminster) Ltd). BP 776 379, June 5, 1957. Through BCIRA 37: 416 (1957). (291)

Two stuffer warps alternate with one another to give improved security of the tufts and binding of the backing.

THREAD-CUTTING DEVICE. R. Hrdina. BP 776 481, June 5, 1957. Through BCIRA 37: 415 (1957). (292)

The thread from the exhausted pirn is cut and, simultaneously, the thread from the new pirn is secured to the weft change mechanism.

JACQUARD LOOMS WITH DRILLED PLATES INSTEAD OF CYLINDERS. C. T. Dracup and G. Dracup (to Samuel Dracup & Sons Ltd). BP 776 571, June 12, 1957. Through BCIRA 37: 416 (1957). (293)

REMOVABLE WOVEN FABRIC LABELS FOR MARKING TEXTILES. H. Meyer (to Polymark Ltd). BP 776 789, June 12, 1957. (Addition to BP 735 236). Through BCIRA 37: 416 (1957). (294)

GRIPPER MECHANISM FOR AXMINSTER LOOM. E. M. Scheid and G. Wilkesmann (to Vorwerk & Co.). BP 776 949, June 12, 1957. Through BCIRA 37: 415 (1957). (295)

WEAVING COMB FOR HAND LOOMS. W. H. Haughton. BP 778 243, July 3, 1957. Through BCIRA 37: 448 (1957). (296)

Device for separating warps and for combing wefts together.

TEMPLES. W. R. Coxon (to L. Muckelt & Co. Ltd). BP 778 313, July 3, 1957. Through BCIRA 37: 448 (1957). (297)

The temples and their mountings allow increased movement of the lay.

SHUTTLE GUIDE FOR CIRCULAR LOOM. J. Rabeux and R. Jacob (to Societe d'Applications Generales d'Electricite & de Mecanique). USP 2 813 547, Nov. 19, 1957. (298)

WEFT INSERTION DEVICE. R. Dewas (France). USP 2 813 548, Nov. 19, 1957. (299)

Pulling needle with a springy clamp and a guard for controlling the weft end in a continuous weft feeding loom.

SHUTTLE PICKING MECHANISM. E. Pfarrwaller (to Sulzer Freres SA). USP 2 813 549, Nov. 19, 1957. (300)

Picking mechanism in which the picking force is supplied by a power accumulating means and in which a picking lever is held in picking position by means of a toggle joint.

LOOSE REED LOOM. E. Baumgartner (Switzerland). USP 2 813 550, Nov. 19, 1957. (301)

Suspension device for the pivotal support of the reed on the loom lay. The reed casing is spaced apart from the supporting point.

LOOM TAKEUP. S. A. Shorter (to British Cotton Industry Research Assoc.). USP 2 813 551, Nov. 19, 1957. (302)

Change speed gearing for takeup mechanism which can be fitted to existing looms and which eliminates barring due to nonuniform takeup.

NEEDLE CARPET LOOM. C. Lyle and T. V. McClure. USP 2 814 315, Nov. 26, 1957. (303)

Apparatus for controlling the selective insertion of different weft yarns presented to the needle in accordance with a predetermined pattern.

ACTUATING AND CONTROLLING MECHANISM FOR DOUBLE LIFT DOBBY HEDDLE SHAFT. H. H. Stäubli (to Gebr. Stäubli & Co.). USP 2 815 044, Dec. 3, 1957. (304)

LOOM TEMPLE ROLL. V. B. Splawn. USP 2 815 045, Dec. 3, 1957. (305)

Temple roll having a rigid core and a cloth-engaging elastic cover composed of a series of individual, axially displaceable resilient ribs to reduce weftwise cloth slippage.

KNITTING C 3

PATTERN MECHANISM FOR CIRCULAR KNITTING MACHINES. F. C. Wiesinger (to Wildman Jacquard Co.). USP 2 814 937, Dec. 3, 1957. (306)

Pattern mechanism for circular independent needle machines in which the pattern drums are rotated and advanced continuously at a uniform rate when in use, eliminating more expensive intermittent motions.

WARP KNITTED FABRIC. R. J. Atkin. BP 755 323, Aug. 22, 1956. Through BCIRA 37: 416 (1957). (307)

Producing floats in warp-knitted fabric, and automatically cutting them, especially during an early part of the travel of the fabric away from the needles.

LINEAR DIMENSION GAUGE FOR STRAIGHT BAR KNITTING MACHINES. G. E. Stokes (to Hosiery & Allied Trades Research Assoc.). BP 778 202, July 3, 1957. Through BCIRA 37: 448 (1957). (308)

PATTERN DRUM ATTACHMENT FOR CIRCULAR KNITTING MACHINE. J. I. Macon, J. T. Canupp and R. C. Koonts. USP 2 813 410, Nov. 19, 1957. (309)

Adjustable cam construction for pattern drum which provides for the easy conversion of the cam elements for different knitting operations.

KNITTING MACHINE NEEDLE RETAINER. F. P. Crouch (to P. H. Hanes Knitting Co.). USP 2 814 189, Nov. 26, 1957. (310)

Retainer for preventing lateral displacement of needles from the grooves formed in needle dials or other needle mounting mechanisms.

GARTER TOP STOCKING. J. V. Clarke and S. I. Burd (to Prestige, Inc.). USP 2 814 938, Dec. 3, 1957. (311)

Stocking with a long shadow welt and a short welt knit of rubber core yarn. This welt automatically forms a tight, uniform garter roll if not restrained.

FABRICS C 4

PNEUMATIC TIRES. D. H. D. Cooper (to Dunlop Rubber Co. Ltd). BP 771 570, Apr. 3, 1957. Through BCIRA 37: 289 (1957). (312)

Tire cord fabrics of rayon, nylon, or Terylene are described, at least two of which are used to form a tread-reinforcing breaker.

GLASS FIBER NONWOVEN FABRIC-REINFORCED POLYESTER RESIN SHEETS. L. H. Griffiths (to Semtex Ltd). BP 771 833, Apr. 3, 1957. Through BCIRA 37: 296 (1957). (313)

Transverse layers of threads are held together at their crossing-points by a bonding composition.

NONWOVEN POROUS FIBROUS STRUCTURES. Carl Freudenberg KG. BP 777 356, June 19, 1957. Through BCIRA 37: 456 (1957). (314)

Relates to the impregnation of fiber fleeces with rubber and claims, 4, 4'-dithiodimorpholin as a vulcanizing agent.

NONWOVEN FIBER MATS. O. R. Videen (to Wood Conversion Co.). USP 2 813 806, Nov. 19, 1957. (315)

Nonwoven fabrics are prepared by impregnating a web of fibers with an aqueous dispersion of a starch or starch derivative and drying.

COMPOSITE FABRICS. D. Finlayson, M. W. Alford and W. P. Pfeil (to British Celanese Ltd). BP 777 452, June 26, 1957. Through BCIRA 37: 449 (1957). (316)

Laminated materials, e.g. for semi-stiff collars, have one fabric containing fibers of cellulose acetate with an acetyl value between 58 and 62.5.

WOVEN WEBBING. A. A. Lethern and J. S. Quirico (to Mills Equipment Co. Ltd). BP 777 567, June 26, 1957. Through BCIRA 37: 449 (1957). (317)

The webbing, e.g. for safety belts, has tubular pockets woven in. The pockets are filled with rods to give a rib-like structure.

NONWOVEN FABRICS. A. D. Gatling (to Dunlop Rubber Co. Ltd). BP 777 734, June 26, 1957. Through BCIRA 37: 449 (1957). (318)

A web of weft threads, which may be thermoplastic or coated with an adhesive, is imposed across a web of warp threads.

MANUFACTURE OF CHENILLE CARPETS WITH UNDULATING PILE. J. A. Rennie (to James Templeton & Co. Ltd). BP 778 377, July 3, 1957. Through BCIRA 37: 449 (1957). (319)

APPARATUS FOR PRODUCING FIBER WEBS. H. Kloss (to Sued-West-Chemie GmbH). USP 2 811 195, Oct. 29, 1957. (320)

Dry process apparatus in which a dispersion of fiber materials (mixed with a powdered thermosetting resin, if desired) is suspended in a gas. The resulting suspension ascends spirally to a surface where the mixture of synthetic resin and fibers is separated from the gas.

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

WATER REPELLENT FABRICS. Midland Silicones Ltd. BP 755 028, Aug. 15, 1956. Through BCIRA 37: 426 (1957). (321)

The fabric is treated with one or more organo-silicon compounds having on the average 1-2.5 methyl groups per Si atom, subjected to compressive shrinkage, dried, and baked.

SODIUM CHLORITE BLEACHING. Deutsche Gold und Silber Scheideanstalt. BP 755 196, Aug. 15, 1956. Through BCIRA 37: 422 (1957). (322)

Titanium or a titanium alloy predominates as the metal for parts of plant that come into contact with chlorite bleach liquors.

APPARATUS FOR LIQUID TREATING FABRICS IN A FESTOON-LIKE ARRANGEMENT. A. J. Brunner (Italy). USP 2 814 192, Nov. 26, 1957. (323)

OBTAINING CREASE RESISTANCE IN PILE FABRICS. G. A. Merkens (to Denholme Silk Weavers (British) Ltd). BP 755 939, Aug. 29, 1956. Through BCIRA 37: 425 (1957). (324)

The fabric is impregnated with an aqueous solution at pH not above 6, containing a crystalloidal intermediate condensation leading to an anti-crease resin (e.g. urea-formaldehyde) and a polysiloxane, and dried and baked.

IMPARTING HYDROPHOBIC PROPERTIES TO FIBERS AND FABRICS. Wacker-Chemie GmbH. BP 755 949, Aug. 29, 1956. Through BCIRA 37: 426 (1957). (325)

The fabric is treated with a heat-hardenable organo-silicon compound and an oxy-salt of zirconium.

IMPROVING THE WATER-ABSORPTION CAPACITY OF POLYAMIDE FIBERS. Farbenfabriken Bayer AG. BP 757 274, Sept. 19, 1956. Through BCIRA 37: 495 (1957). (326)

Polyamide materials (e.g. knitted fabrics from mixed polyamides of caprolactam and hexamethylenediamine adipate) are treated with an aqueous-alcoholic emulsion of a mixed polyamide (as above) plus a linear polyester of the type of polymerized glycol succinate.

PATTERNED MECHANICAL FINISH ON WOVEN OR KNITTED FABRICS. Cilander AG. BP 757 322, Sept. 19, 1956. Through BCIRA 37: 496 (1957). (327)

To increase the contrast in washproof, patterned finishes, the fabric is treated with a shrinking agent that acts preferentially on the unchanged areas, and the puckered fabric is then stretched until smooth.

CHEMICAL MODIFICATION OF CELLULOSE. M. Doughty and B. J. Brown (to Fothergill & Harvey Ltd). BP 757 386, Sept. 19, 1956. Through BCIRA 37: 495 (1957). (328)

Crosslinking of cellulose chains is effected by treatment with a bisglycidyl ether of a polyhydroxy phenol (e.g. quinol or resorcinol) in the presence of an alkali hydroxide at about 120° C. Eight examples are given in detail.

PROCESS FOR BONDING SYNTHETIC RESINS TO GLASS FIBERS. Farbenfabriken Bayer AG. BP 770 539, Mar. 20, 1957. Through BCIRA 37: 296 (1957). (329)

METHOD AND APPARATUS FOR SHRINKING KNITTED FABRIC. S. G. Andersonn (Sweden). BP 771 196, Mar. 27, 1957. (Addition to BP 747 891). Through BCIRA 37: 297 (1957). (330)

The helical springs, between which the fabric passes, are heated electrically.

METALLIZATION EFFECTS ON TEXTILES. Heberlein & Co. AG. BP 772 127, Apr. 10, 1957. Through BCIRA 37: 297 (1957). (331)

Metal vapor (aluminum, copper, silver, gold) is deposited on cloth that has been given a shreiner or moiré finish.

WASHING MACHINES FOR LONG LENGTHS OF FABRIC. J. Dungler (France). BP 771 629, Apr. 3, 1957. Through BCIRA 37: 293 (1957). (332)

The fabric, in superposed folds, is led through a J-shape accumulator, the lower half of which is perforated and immersed in the washing liquid. The folds are displaced periodically.

FIREPROOF GARMENTS. K. Quehl (Germany). BP 772 364, Apr. 10, 1957. Through BCIRA 37: 297 (1957). (333)

Impregnation with metallic oxides (antimony, tin, or titanium) and after-chlorinated polyvinyl chloride is claimed to give a permanent proof, the textile material remaining pliable.

FABRIC PROCESSING. E. Kusters (Germany). BP 773 744, May 1, 1957. Through BCIRA 37: 326 (1957). (334)

The fabric passes round a drum or roller that is mounted eccentrically in a receptacle containing the treating liquid (e.g. for washing, bleaching, dyeing, or impregnation). The surface of the drum or roller is covered with sponge rubber, and liquid passes through to the interior.

FABRIC RESISTANT TO WAR GASES. E. Ganslandt (to Trelleborgs Gummifabriks AB). BP 773 893, May 1, 1957. Through BCIRA 37: 328 (1957). (335)

A woven nylon fabric coated with butyl rubber, and containing a filler of flakes of mica, graphite, or aluminum, is described.

APPARATUS FOR THE TREATMENT OF TEXTILES WITH VOLATILE SOLVENTS. H. J. Ross (to Imperial Chemical Industries Ltd). BP 773 968, May 1, 1957. Through BCIRA 37: 326 (1957). (336)

Solvent recovery is provided for and the apparatus is particularly applicable to preparing cotton piece goods for dyeing.

WATERPROOF NONWOVEN FABRIC. V. O. Robinson (to Robinson & Sons Ltd). BP 776 058, June 5, 1957. Through BCIRA 37: 426 (1957). (337)

Cellulose wadding coated on one face with polyethylene.

COATED FABRICS. Farbenfabriken Bayer AG. BP 776 087, June 5, 1957. Through BCIRA 37: 425 (1957). (338)

Fabrics are coated with a polyisocyanate modified polyester containing free hydroxyl groups and a further quantity of a polyisocyanate, and heated to a temperature not exceeding 180° C. High luster, stability, and resistance to oils are claimed.

STEAM TREATMENT OF SKEINS. E. E. Bellmann and F. Bellmann. BP 776 103, June 5, 1957. Through BCIRA 37: 412 (1957). (339)

The skeins are steamed under tension in a closed vessel and are simultaneously rotated.

PLEATING CELLULOSIC FABRICS. P. F. Crosland. BP 776 195, June 5, 1957. Through BCIRA 37: 426 (1957). (340)

The fabric is impregnated with a resin pre-condensate and a catalyst, dried, folded, heated, and washed with mechanical agitation but without tension.

FINISHING TREATMENT FOR CELLULOSE TRIACETATE FABRICS. D. Finlayson and A. M. Goddard (to British Celanese Ltd). BP 776 346, June 5, 1957. Through BCIRA 37: 425 (1957). (341)

The degree of crystallinity, safe ironing temperature, and strength are increased by treatment with an organic swelling agent, e.g. benzene.

IMPROVING THE SURFACE PROPERTIES OF TEXTILE FIBERS. Deutsche Gold und Silber Scheideanstalt. BP 776 398, June 5, 1957. Through BCIRA 37: 425 (1957). (342)

Treatment with aluminum oxide aerogels improves handle, appearance, and abrasion resistance.

WET PROCESSING OF FABRICS. A. Schrott, W. Martini and H. E. Martini (to Martini & Cie). BP 776 406, June 5, 1957. Through BCIRA 37: 424 (1957). (343)

One of a pair of squeezing rollers is covered with elastic, porous rubber that absorbs the liquid medium, and, at the nip, forces it into the fabric.

WATERPROOFING FIBROUS MATERIALS. Farbwerke Hoechst AG. BP 777 466, June 26, 1957. Through BCIRA 37: 456 (1957). (344)

Mixed aluminum salts, e.g. alunimum monostearate diacetate, are used in organic solvents, advantageously with paraffin wax, etc.

CYANOETHYLATION OF COTTON. H. Weisberg (to Londat Aetz Fabric Co.). USP 2 812 999, Nov. 12, 1957. (345)

An end product free of harshness and having a uniformly soft hand is obtained by adding small amounts of alkylnitrile during cyanoethylation of cotton with acrylonitrile.

ACYLATION OF CELLULOSE. W. Hagenbuch and A. Rheiner (to Saul & Co.). USP 2 814 617, Nov. 26, 1957. (346)

Acylated cotton or cellulose is obtained by treatment with a mixture consisting of acetic acid, acetic anhydride, and, as a catalyst, the reaction product of one mole of sulfamic acid and two moles of acetic anhydride.

TUBE SPINNING SYNTHETIC YARNS. J. T. Rich (to American Enka Corp.). USP 2 814 850, Dec. 3, 1957. (347)

Method of controlling yarn tension during liquid treatment of a warp formed from yarns discharged from a tube spinning machine.

YARN LIQUID TREATMENT APPARATUS. G. Severini (to Studi E Brevetti Applicazioni Tessili Srl). USP 2 814 939, Dec. 3, 1957. (348)

Thread-advancing reel in which the processing liquors are separated into several zones by means of flexible belts engaging the periphery of the reel.

POLYSILOXANE COATED FABRICS. F. A. Smith (to Union Carbide Corp.). USP 2 815 300, Dec. 3, 1957. (349)

Flexible tapes with good solvent and moisture resistance, high thermal stability, and excellent dielectric properties are prepared by impregnating fabrics before curing with a low-molecular-weight soluble liquid polysiloxane containing alkoxy-type end blockers to control the molecular weight.

ANTISTATIC SYNTHETIC FIBERS. S. A. Murdock (to Dow Chemical Co.). USP 2 815 301, Dec. 3, 1957. (350)

Sulfonated pentahalobenzene compounds are claimed as antistatic agents for synthetic fibers, e.g. acrylic, polyamide, and polyester fibers.

DYEING AND PRINTING D 2

REMOVAL OF FABRIC SAMPLES FROM DYEING MACHINES. W. A. Dawes and W. H. Copley (to Sir James Farmer Norton & Co. Ltd). BP 753 335, July 25, 1956. Through BCIRA 37: 295 (1957). (351)

A slidable, tubular fitting with a sharp edge is mounted on the wall of the vessel and serves to cut samples out of the fabric. These are ejected by the pressure in the vessel, or by pneumatic or hydraulic means, and pass out through a tube that has a valve outside the vessel.

APPARATUS FOR DYEING UNDER PRESSURE. Etablissements Callebaut- de Blicquy SA. BP 753 676, July 25, 1956. Through BCIRA 37: 296 (1957). (352)

CLOSED DYE VAT FITTED WITH AN EXPANSION VESSEL. H. Krantz and W. Krantz. BP 755 877, Aug. 29, 1956. Through BCIRA 37: 424 (1957). (353)

DRIVING MEANS FOR DYEING MACHINES. Allmanna Svenska Elektriska Aktiebol. BP 756 530, Sept. 5, 1956. Through BCIRA 37: 494 (1957). (354)

The invention relates to an open-width dye jig in which the motors driving the winding and unwinding beams are fitted with electrical controls, responsive to tension in the cloth as it passes guide rollers, so that the cloth speed remains constant though the beam diameter varies.

TEXTILE PRINTING PROCESS. F. R. Alsberg, N. Bradbury, and A. S. Fern (to Imperial Chemical Industries Ltd). BP 757 073, Sept. 12, 1956. Through BCIRA 37: 495 (1957). (355)

A resist printing paste for use with vat dyes contains one or more soluble salts of Ca, Sr, Ba, Al, Sn, Pb, Zn, Cd, Fe, or Mn. Six examples are given in detail.

DRIVE FOR THE PRINTING CYLINDERS OF ROTARY PRINTING MACHINES WITH REGISTERING MEANS. P. Kleinewefers (Germany). BP 757 131, Sept. 12, 1956. Through BCIRA 37: 495 (1957). (356)

Some of the rollers of rotary printing machines, especially on roller bearings, tend to oscillate within the clearance of the teeth of the registering wheels, with the result that the color registration of the print is faulty. The invention relates to a drive in which the shafts of the rollers (or driving wheels fast on the shafts) are connected by gears to a variable-speed motor on the one hand and to the central wheel of the registering mechanism on the other hand. One arrangement is shown in a diagram.

APPARATUS FOR DYEING FIBROUS MATERIAL. O. Gümbel, M. Scholl, and F. Scharfenberger. BP 757 431, Sept. 19, 1956. Through BCIRA 37: 494 (1957). (357)

The apparatus comprises, within a common vessel, (A) a dyeing chamber (vat) and (B) a dye mixing and/or heating chamber, separated by a partition, and a propeller, outside the vessel, having its inlet port connected with (B) and its outlet port with (A). The circulating dye liquor flows over the top of the partition from (A) to (B).

PRODUCING PRINTS ON ACETATE OR POLYAMIDE FABRICS WITH WATER-INSOLUBLE MONOAZO DYESTUFFS. Farbwerke Hoechst AG. BP 757 545, Sept. 19, 1956. Through BCIRA 37: 495 (1957). (358)

The printing paste contains a diazo-amino compound made from a hydroxydialkylamine having C_1 to C_4 chains (e.g. diethanolamine) and diazotized 1-amino-2-methoxybenzene-5-sulfonic acid dimethylamide (or diethylamide), and also a coupling component suitable for the production of ice colors. The azo dye is developed by neutral steaming followed by treatment with an acid, e.g. in steam containing formic or acetic acid. One example is given in detail and others by name of the coupling component; they refer to red prints on cellulose acetate and polyamide materials.

TREATMENT OF REGENERATED CELLULOSE FOR DYEING. Phrix-Werke AG. BP 771 328, Mar. 27, 1957. Through BCIRA 37: 296 (1957). (359)

Viscose (or cuprammonium) rayon yarns (or fibers) are treated with a condensation product of methylol urea and glyoxal in the presence of an acid catalyst. The impregnated material swells less and may be evenly dyed with substantive dyes.

DYEING TEXTILE FIBERS WITH VAT DYESTUFFS. Cassella Farbwerke Mainkur AG. BP 771 563, Apr. 3, 1957. Through BCIRA 37: 295 (1957). (360)

The vatting and dyeing are carried out in the presence of a compound of the betaine series, e.g. hydroxypropane-sulfo-pyridine-betaine, as a leveling agent.

PACKAGE DYEING APPARATUS. W. S. Johnson. USP 2 813 416, Nov. 19, 1957. (361)

Package dyeing apparatus in which a portion of the dye bath liquor discharged from the dye kier is returned to an expansion tank for mixing and recirculation.

HEAT EXCHANGE APPARATUS FOR HEATING DYE LIQUORS. C. Duckworth (to Bradford Dyers' Assoc. Ltd). BP 771 686, Apr. 3, 1957. Through BCIRA 37: 296 (1957). (362)

DYEING ASSISTANT FOR AROMATIC LINEAR POLYESTER FIBERS. Ciba Ltd. BP 771 808, Apr. 3, 1957. Through BCIRA 37: 295 (1957). (363)

Disperse acetate dyes are used, the fibers being treated before or during the dyeing process with 2-oxydiphenyl in the presence of turkey red oil and an alcohol that is sparingly soluble in water (pine oil).

MODIFYING CELLULOSE OR CELLULOSE DERIVATIVES FOR DYEING. Farbenfabriken Bayer AG. BP 772 343, Apr. 10, 1957. Through BCIRA 37: 296 (1957). (364)

Cotton or regenerated celluloses react with carbodiimides in the presence of copper to give isourea ethers. The animalized fibers can be dyed with acid dye.

NONROTATING SUPPORTS FOR DOCTOR ROLLERS IN A SCREEN PRINTING PROCESS. J. Zimmer (to Zimmer's Erben KG). BP 773 562, Apr. 24, 1957. Through BCIRA 37: 328 (1957). (365)

AUTOMATIC SCREEN PRINTING MACHINE. W. C. Hauck (Germany). BP 776 429, June 5, 1957. Through BCIRA 37: 424 (1957). (366)

TELESCOPIC HANK POLES FOR DYEING MACHINES. S. R. T. Freeman (to Freeman Taylor Machines Ltd). BP 776 563, June 12, 1957. Through BCIRA 37: 424 (1957). (367)

PRODUCTION OF WHITE DISCHARGE PRINT EFFECTS IN VAT DYED FABRICS. Badische Anilin- & Soda-Fabrik AG. BP 776 721, June 12, 1957. Through BCIRA 37: 424 (1957). (368)

Water-soluble polymers (or copolymers) of N-vinylpyrrolidones are incorporated in the printing pastes.

PRINTING AND PAD-DYEING. Sandoz Ltd. BP 776 796, June 12, 1957. Through BCIRA 37: 425 (1957). (369)

The printing or pad-dyeing medium comprises an aqueous viscose solution, urea (or other nitrogen compound), and a pigment dyestuff, and the prints or pad-dyeings are after-treated so as to regenerate water-insoluble cellulose from the viscose.

HIGH TEMPERATURE DYEING. Groeninghe Ververij PVBA. BP 776 983, June 12, 1957. (Addition to BP 678 952). Through BCIRA 37: 424 (1957). (370)

Super-heated water is circulated through the textile material, in a closed system under pressure, before adding the dye.

SILK SCREEN PRINTING MACHINE. Argon Service Ltd. BP 777 022, June 12, 1957. Through BCIRA 37: 424 (1957). (371)

DYEING WITH METAL COMPLEXES. Badische Anilin- und Soda-Fabrik AG. BP 777 389, June 19, 1957. Through BCIRA 37: 455 (1957). (372)

Dyeings of good rubbing fastness, on wool, nylon, or silk, are obtained by treatment (before, during, or after dyeing) with a water-soluble salt of an acid ester of, e.g., the addition product of 80 mols. of ethylene oxide with 1 mol. of oleyl alcohol.

DYEING ACRYLONITRILE COPOLYMERS. Kunstzijdespinnerij Nyma NV. BP 777 534, June 26, 1957. Through BCIRA 37: 455 (1957). (373)

Acid dyes that contain a complex bound metal (Irgalan, Cibalan, Neolan) are applied in presence of a salt (e.g. sodium sulfate or chloride) at temperatures above 100° C.

DYEING ASSISTANT FOR ACRYLONITRILE FIBERS. C. G. Evans (to Deering Milliken Research Corp.). USP 2 812 230, Nov. 5, 1957. (374)

Dye assistant composed of a mixture of a dimer of 5-furfuryl-furfuryl alcohol and a phenolic compound, e.g. paraphenylphenol.

DYEING ACRYLONITRILE FIBERS WITH ACID DYES. C. G. Evans and W. T. Rainey, Jr. (to Deering Milliken Research Corp.). USP 2 812 998, Nov. 12, 1957. (375)

Acrylic fiber containing fabrics are dyed by immersion in an aqueous bath containing an acid dyestuff, a naphthol compound, and a soluble cupric salt.

ACID FADING INHIBITION. J. Eisele, W. Federkiel, E. W. Gassenmeier and C. Schuster (to Badische Anilin- und Soda-Fabrik AG). USP 2 813 773, Nov. 19, 1957. (376)

Gas or atmospheric fading of dyed cellulose acetate fabrics is inhibited by incorporating certain cyanoalkylamines in the fabric.

GAS FADING INHIBITION. C. Schuster, K. Maier, R. Gehm, J. Eisele and W. Federkiel (to Badische Anilin- und Soda-Fabrik AG). USP 2 813 774, Nov. 19, 1957. (377)

Gas or atmospheric fading of dyed cellulose acetate fabrics is inhibited by incorporating esters of hydroxyalkylamines in the fabrics.

DEVELOPING ICE-COLORS IN PRINTING AND DYEING. E. Glietenberg and J. Hassmann (to Farbenfabriken Bayer AG). USP 2 815 259, Dec. 3, 1957. (378)

Ice-color shades, particularly blue, green, or violet, are prepared by neutral steaming using printing pastes or slop-padding solutions containing the neutral fixed alkali salts of diazoamino compounds and fixed alkali salts of ice-color coupling components.

MECHANICAL PROCESSES D 3

WEFT STRAIGHTENING APPARATUS. J. D. Robertson. BP 754 923, Aug. 15, 1956. Through BCIRA 37: 362 (1957). (379)

EXPANDING AND CONTRACTING ROLLS. J. D. Robertson. BP 754 967, Aug. 15, 1956. Through BCIRA 37: 363 (1957). (380)

Curved expander rolls in which the curvature may be adjusted as desired.

EMBOSSING THERMOPLASTIC FABRICS. L. J. Moncrieff (to British Celanese Ltd). BP 755 632, Aug. 22, 1956. Through BCIRA 37: 425 (1957). (381)

Fabric is temporarily softened by bringing it into contact with a heated, perforate pattern while wet with a liquid that assists the softening but is not a softener at room temperature, forced into close contact with the pattern, and hardened by cooling, and stripped off the pattern.

CURVED ROLLS TRANSVERSELY STRETCHING WEB MATERIALS. J. D. Robertson and W. E. Dean. BP 756 136, Aug. 29, 1956. Through BCIRA 37: 496 (1957). (382)

A curved expander roll comprises a rigid axle having a multiplicity of straight, round bearing portions spaced out along it and having slight bends between at least some of the straight portions that together give the desired curvature, rotatable elements (e.g. of wood) mounted on the straight portions, and, over all, a flexible sleeve (e.g. of rubber).

MACHINE FOR DISENGAGING AND STRIPPING OFF FLOATING BACK THREADS ON VELVETS, CARPETS, AND OTHER FABRICS. H. Paulus. BP 756 508, Sept. 5, 1956. Through BCIRA 37: 496 (1957). (383)

When pile fabrics are woven double and the two layers are separated by cutting through the pile threads, one layer is ready for trimming but the other has loose or "floating" loops of pile thread at its reverse face. These have to be detached ("disengaged") at one end and then removed ("stripped"). The invention relates to a machine for doing the first or both of these operations. The essential part is an endless belt fitted with inclined teeth that traverses the fabric obliquely as this is carried through the machine.

AUTOMATIC WINDING MACHINES FOR FABRICS, PAPER, ETC. W. Gardel (to Metalmeccanica Srl). BP 757 475, Sept. 19, 1956. Through BCIRA 37: 496 (1957). (384)

The invention relates to an automatic machine for continuously winding rolls of strip or ribbon material, in which a full roll passes from a winding to a tensioning roller while an empty one slips into its place from a magazine, and the strip or ribbon is cut and the free end is transferred to the fresh roll.

DEVICE FOR INTERMITTENTLY FEEDING SUBSTANTIALLY EQUAL LENGTHS OF A WEB OF MATERIAL. Vyzkumny Ustav Obrabecich Stroju a Obrabeni. BP 773 823, May 1, 1957. Through BCIRA 37: 319 (1957). (385)

APPARATUS FOR FEEDING FABRIC TO TENTERING MACHINES. H. Vits (to Vits-Elektro-GmbH). BP 775 676, May 29, 1957. Through BCIRA 37: 397 (1957). (386)

NAPPING MACHINE. A. Monforts and C. M. von Hobe (Germany). BP 777 461, June 26, 1957. Through BCIRA 37: 457 (1957). (387)

The speeds of the drum, the raising rollers, and the fabric are made interdependent and adjustable.

HOSIERY MACHINERY. G. S. Helliwell (to Mellor Bromley & Co. Ltd and Samuel Pegg & Son). BP 777 828, June 26, 1957. Through BCIRA 37: 457 (1957). (388)

Machine for drying and boarding articles on forms in a closed chamber.

FLOCKING APPARATUS. W. C. Huebner (to Huebner Co.). BP 777 842, June 26, 1957. Through BCIRA 37: 455 (1957). (389)

An electrostatic field of force is used to transfer printing or coating substances to web or sheet material.

SYNTHETIC YARN SINGEING. G. McLeary (to Imperial Chemical Industries Ltd). BP 777 992, July 3, 1957. Through BCIRA 37: 447 (1957). (390)

Loose and projecting fibers on yarns spun from nylon and Terylene staple are removed by passing the yarns through an aperture in a metal plate, or through a wire loop, heated to at least 350° C.

APPARATUS FOR HOT-STRETCHING SYNTHETIC FABRICS. G. V. Kullgren and D. M. Wilkinson (to Aetna-Standard Eng. Co.). USP 2 807 096 and 2 807 097, Sept. 24, 1957. (391)

Oven for subjecting synthetic fabrics, intended for use in tires and mechanical rubber goods, to drastic stretching while heating and cooling in rapid succession.

HOSIERY STEAM TREATING CHAMBER. E. Bellmann. USP 2 811 032, Oct. 29, 1957. (392)

TUBULAR FABRIC FEEDING AND ROLLING MACHINE. E. S. Beard. USP 2 812 568, Nov. 12, 1957. (393)

Apparatus for spreading, flattening, and stretching fabrics to desired widths during finishing, and thereafter rolling the fabric.

SELVAGE STRAIGHTENING MECHANISM. W. G. Quick and W. O. Wilson (to Kingsboro Mills Inc.). USP 2 813 325, Nov. 19, 1957. (394)

Mechanical means for uncurling selvages at the time the fabric is engaged with the pins or needles of a tentering frame.

DRYING D 4

SELVAGE DETECTING DEVICE FOR A TENTER. W. W. Spooner. BP 753 481, July 25, 1956. Through BCIRA 37: 297 (1957). (395)

Feeler that detects the true edge of fabric being fed to a tenter even though the selvage may be curled.

DRYING MACHINERY. B. F. H. Mellbin (Sweden). BP 753 438, July 25, 1956. Through BCIRA 37: 297 (1957). (396)

Drying machine for textile fabrics, paper, etc., has a number of slit-like nozzles, through which hot air or other gaseous medium is blown at the web from both sides, spaced apart by channels through which the medium escapes. Each nozzle is screened by walls that project farther towards the web than the nozzle. The nozzles constitute the exits of a series of rectangular blast boxes.

AUTOMATICALLY CONTROLLING THE TEMPERATURE OF DRYING CYLINDERS. F. Holt and G. Lee (to Thomas Holt Ltd). BP 771 442, Apr. 3, 1957. Through BCIRA 37: 297 (1957). (397)

A bulb thermostat is suspended in the condensate in the drying cylinder.

DRYING OF FABRICS. F. G. Audas and J. Wilson (to British Rayon Research Assoc.). BP 773 598, May 1, 1957. Through BCIRA 37: 328 (1957). (398)

Use of a hot fluidized bed of small discrete solid particles, e.g. siliceous sand.

CONTINUOUS DRYING OF STRIPS AND WEBS OF FABRIC. J. Dungler (France). BP 773 606, May 1, 1957. Through BCIRA 37: 329 (1957). (399)

The fabric is submitted to the simultaneous actions of a circulating hot gas (products of combustion) and radiations from graphite-coated elements, the temperature of which is raised by contact with the gas.

HEATING AND DRYING A CONTINUOUS WEB BY PASSING AN ELECTRIC CURRENT THROUGH THE MATERIAL. P. Lippke (Germany). BP 774 227, May 8, 1957. Through BCIRA 37: 397 (1957). (400)

DRYING ARRANGEMENT FOR WEB-LIKE MATERIAL. Aktiebolaget Svenska Flaktfabriken. BP 776 141, June 5, 1957. Through BCIRA 37: 426 (1957). (401)

Air is circulated at right angles to the upper and lower surfaces of the moving web.

TENTERING MACHINE FOR DRYING FABRICS IN LONG LENGTHS. H. Lodding (to E. Gordon Whiteley Ltd). BP 776 236, June 5, 1957. Through BCIRA 37: 426 (1957). (402)

Two-jawed blowing heads are disposed above and below the fabric.

DRYING CYLINDER. W. W. Spooner (to Spooner Dryer & Engineering Co. Ltd). BP 778 232, July 3, 1957. Through BCIRA 37: 457 (1957). (403)

Method of heating, in which water is circulated through a cylinder and steam is fed into the water.